

U.B.H.T.

Clinical Audit Report

1999/2000

Contents	Page number
Introduction from Chairman of Clinical Audit Committee	3
Clinical Audit Co-ordinator's report	4
Preamble	4
Achieving effective clinical audit	4
Clinical audit strategy	4
Financial information	4
Organisational arrangements	6
Clinical audit staff development	6
Training for clinical staff	7
Auditing audit	7
Performance targets	8
Clinical Effectiveness and Evidence-Based Practice	9
Quality & Consumer Involvement	9
Audit prizes	10
NICE conference	10
Clinical audit website	10
IM&T Procurement	10
Audit server	10
Project Reports for 1999/2000	12
Contracted audits	12
Summary statistics	13
Key themes	14
Trust-wide audits	15
Directorate reports	17
Cardiothoracic Services	17
Children's Services	22
Community Services	27
Critical Care (including Anaesthesia)	34
Dental Services	40
Homeopathic Medicine	45
Medicine	48
O&G / ENT	55
Occupational Health	62
Oncology	64
Ophthalmology	68
Pathology	73
Radiology	81
Specialty Services	86
Surgery	89
Appendices	
A Clinical Audit Strategy	
B Staff list	
C 'Current' projects from 1998/9 which do not appear in 1999/2000 report	
D Adherence to 1999/2000 Forward Programmes	
E Forward Programmes for 2000/1	
F "Developing Excellence in Clinical Audit"	
G Training Policy	
H Bids Policy	
I Framework for auditing audit	
J Clinical Audit Proposal Form	
K Training flyer	
L Clinical Audit 'Oscars' flyer	
M Clinical Effectiveness website	

1. Introduction from Chairman of Clinical Audit Committee

It is a pleasure to report on an eventful year which has seen the Clinical Audit Committee function as an effective force. The major change in the structure of the Committee has been the loss of the Primary Care representative which is a consequence of the imminent formation of Primary Care Groups and Trusts, with whom we look forward to developing links; a close liaison with them will enable UBHT to further develop interface audit. This will become increasingly important in assessing clinical performance against the standards laid out in the National Service Frameworks currently being rolled out by the Government.

This year has also been important because it has started to show the benefits of managing our own budget. Prudent management has released funding for important audit projects within the Trust and the Clinical Audit Committee has been able to fund most of the projects for which applications have been received – a mixture of national and local/regional projects. The process of the CAC peer reviewing audit proposals where substantial amounts of money are concerned has contributed to raising the quality of the audit programme as a whole.

Last year saw the first “Audit Oscars” and I am pleased to report that two of the presentations from this event and one other presentation were accepted for the first NICE Conference in Harrogate in 1999. Furthermore, all three poster presentations were highly commended. This is very pleasing as 60% of submissions to the conference were rejected. The “Audit Oscars” event this year was also very successful. I would like to thank the Special Trustees once again for their financial support for the prizes. Another recognition of the quality of audit within the Trust has come from Avon Health who have cited audit projects performed in UBHT as examples of exemplar work. Similar commendation was received from the Clinical Negligence Scheme for Trusts for whom the Trust has been asked to act as a reference site in respect of its auditing of the quality of patient records.

In addition to the usual work of the Committee, we have produced useful discussion documents on developing excellence in clinical audit and training. We have also defined the bids policy for audit money as a guide for applicants. I hope that this will make the process easier and more transparent.

However, I would not like to give the impression that there is not further scope for improvement. I still feel that particular attention is needed to monitor the effects of change and that any improvements in performance are maintained in the long term. However, the large number of audits within UBHT are not just a reflection of its size but also its nature and it is important to realise that many audits are useful for their training purposes. This appears to falsely dilute the proportion of projects which monitor change or show evidence of clinical effectiveness. Other areas which require attention are value for money, demonstrating better clinical outcomes and ensuring that as many projects as possible use existing guidelines or seek to develop them and to involve all health professionals.

What challenges can we expect for the coming year? At a local level, more co-operation with the Research and Development Support Unit, the Clinical Effectiveness Group and the Consumer Involvement and Information Unit will bear fruit in terms of quality and patient participation and I am committed to developing these links. The National Institute for Clinical Excellence has at last started to produce recommendations and as these and National Service Frameworks roll out, they will provide obvious challenges for audit.

I would like to thank all the audit convenors for their support this year. I would like to thank Naaz Nathoo for her secretarial assistance and I would also like to thank Chris Swonnell and Tracey Jones in the Clinical Central Audit Office for their help not only for producing this comprehensive report, but also for their help in the day to day running of audit business.

Zen Rayter
Chairman of the Clinical Audit Committee

2. Clinical Audit Co-ordinator's Report

2.1 Preamble

The past year has been a time for consolidating recent progress; a time in which Clinical Audit's role at the heart of Clinical Governance and Clinical Effectiveness has been reinforced. Fledgling work on Integrated Care Pathways and Clinical Guideline development has begun, and links with Clinical Risk Management have been strengthened at directorate level.

A comprehensive review of directorates' organisational arrangements for clinical audit has been undertaken, resulting in individual action plans for the next twelve months. A summary of this review is included in this report (see paragraph 2.2.7).

The 'gospel' of audit has continued to spread within UBHT with a renewed emphasis on training in order to develop audit skills amongst clinical staff. March 2000 saw the launch of a second clinical audit course as part of the Trust's Staff Development Programme. Training materials are now also available on the new Clinical Audit web site. The second annual 'Audit Oscars' event once again demonstrated the high quality of audit now being undertaken within the Trust.

The last twelve months have seen a number of personnel changes within the Trust's clinical audit team, however I am glad to report that the team is once again up to full strength. Whilst the Clinical Audit Committee (CAC) has recently approved a Training Policy offering audit staff support in developing their professional skills, there nevertheless remains an urgent need to create career development opportunities for staff wishing to remain within the discipline.

As always, my thanks go to Trust's team of audit staff for their hard work and to members of the CAC for their continued support. Thanks once again to Tracey Jones for her assistance in preparing the statistical data contained in this report.

2.2 Achieving Effective Clinical Audit

2.2.1

Clinical Audit Strategy

The primary aims of the Trust's clinical audit programme continue to be:

- To improve the quality of care received by patients by promoting best practice

And thereby

- To improve health outcomes for patients

(For full strategy see Appendix A).

2.2.2

Financial information

In 1999/2000, the Trust released approximately £273,000 to the CAC to fund clinical audit activity. The reduction in the figure reported for 1998/9 is attributable to the following changes:

UBHT Clinical Audit Report 1999/2000

a) A sum of c£22,000 allocated to the Mental Health directorate in 1998/9 has been transferred to the new Avon & Western Wiltshire Mental Health Trust.

b) Whilst the Trust continues to support the use of MDI (Medical Data Index) to collect data for clinical audit, it has been agreed that it is no longer appropriate for it to appear as a cost against the audit budget. Whilst historically MDI began life as a function of clinical audit, it is now clearly housed within the directorate of IM&T. Funding for MDI (c£52,000 in 1998/9) pays for a co-ordinator post plus software licences and now constitutes part of IM&T's baseline budget.

A major change in 1999/2000 was that directorates received funding to cover the cost of employing an audit facilitator (plus a small 'float' for day-to-day expenses), rather than as previously in proportion to the numbers of consultants working in those directorates. This reorganisation enabled a sum of money to be retained centrally by the CAC for distribution to worthy projects requiring additional funding (see Appendix H). The allocation to the Clinical Audit Central Office (CACO) was calculated to cover staff costs, ongoing project commitments and staff study/training.

For 1999/2000 the budget was therefore allocated as follows:

Medicine	£22,000
Oncology	£17,000
Surgery	£17,000
Anaesthesia (now Critical Care)	£16,500
Children's Services	£16,500
Ophthalmology & Homeopathy	£14,000
Pathology	£11,500
Radiology	£11,000
Community Services	£9,500
O&G/ENT	£9,000
Cardiothoracic Services	£8,500
Dental Services	£8,000
Specialty Services	£6,500
Occupational Health	£1,650
TOTAL TO DIRECTORATES	£168,650
Clinical Audit Central Office	£71,000
Bids Fund (controlled by CAC)	£34,000
TOTAL	£273,650
Final carry forward from 1998/9	£21,066
TOTAL BUDGET AVAILABLE FOR 1999/2000	£294,716

In 1999/2000, the budget was used to support clinical audit in the following ways:

Clinical Audit Staff	£210,324
Projects	£26,275
Study, training, conferences, meetings (including related travel costs)	£15,399
Capital expenditure (audit server, network connections)	£2,580
Miscellaneous directorate expenses (floats)	£8,650
Miscellaneous central office expenses (including books, journal subscriptions)	£1,510
TOTAL EXPENDITURE FOR 1999/2000	£264,738
Total resources available at start of year	£294,716
Total carry forward into 2000/1	£29,978

Prudent management of resources means that, whilst some resources must be ringfenced to enable the CAC to support its training policy towards audit staff, for 2000/1 the Committee will be in a position to consider transferring a proportion of the annual carry-forward to increase the 'pot' of money available to support individual projects

2.2.3

Organisational arrangements

Organisational arrangements for clinical audit are unchanged from last year's report. The CACO continues to oversee the work of a team of directorate-based audit facilitators and to provide support to the CAC. Directorates submit quarterly progress reports to the CAC which form the basis of a similar quarterly report which goes from the CAC to Trust's Clinical Governance Committee.

In 1999/2000 we welcomed the following staff into the Trust's audit team of facilitators: Paul Dillon (Cardiothoracic Services), Eleanor Ferris (St Michael's Hospital), Marian Connolly (Medicine), Simon Sewart (Surgery) and Fiona Clark (Community). Clare Conroy has assumed audit duties for Pharmacy, replacing Toni van der Linde. We also said goodbye to James Mackie (now Information Manager for Cardiothoracic Services and the Eye Hospital), Heidi Frydman (now Information Manager for the BRI), Simon Bryant and Betty Underwood. We wish Betty well in her retirement. Kate Gregson, our Audit Clerk, left the Trust in 1999 to be replaced by Richard Osborne and more recently Kerry Reid. Tracey Jones, Deputy CA Co-ordinator has recently enjoyed a four month secondment to the Avon PCAG (Primary Care Audit Group), thereby fostering links between Trust audit and Primary Care.

In the last 12 months, the number of hours of audit support has been increased in the directorates of Community Services, O&G/ENT and Children's Services. The Trust audit team now equates to 12.0 WTE (see Appendix B for full details).

Elsewhere Paul Barham has succeeded Zen Rayter as Audit Convenor for Surgery and John Sparrow has succeeded Jeremy Diamond at the Eye Hospital. The re-organisation of PCAG and the development of audit within PCGs (Primary Care Groups) means that the Committee no longer has representation from Primary Care.

2.2.4

Clinical Audit Staff Development

As mentioned in the pre-ambule, the last year has seen a high turnover of clinical audit support staff. Of particular concern is the fact that two facilitators left the team to take up posts within the Trust's Information Department. Audit facilitators are currently employed at A&C Grade 5. Whilst this represents a fair and realistic entry point into a career in clinical audit, the current structure provides little scope for internal promotion – staff can only progress if the co-ordinator or deputy co-ordinator leave their respective posts. In 2000/1 the CAC will need to give further consideration to this issue (see Appendix F).

One way of encouraging staff to stay with the team is to invest in their training and personal development. This year the CAC has approved a Training Policy (see Appendix G) supporting audit staff in obtaining recognised 'professional' qualifications in Clinical Audit and related subjects (e.g. Clinical Effectiveness).

All audit facilitators have been encouraged to make use of training opportunities (both internal and external). Several facilitators have recently commenced formal studies in Clinical Audit & Effectiveness at the University of Wales, Swansea (we currently have six staff studying at Swansea), whilst the Audit Co-ordinator is pursuing management studies at the University of Bristol. In the last twelve months other staff have attended intensive courses with Healthcare Quality Quest and Midlands Training & Development. All in all, it is fair to say that the Trust now possesses one of the most skilled clinical audit teams in the country. Notwithstanding

this fact, there is an ongoing need to assure the quality of clinical audit work and to this end in 2000/1 the CAC/CACO will be seeking to develop links with directorate line management.

All audit facilitators should now be in the position of having a regular IDPR/IJR with their line manager. The IDPR/IJR process should include input from the respective convenor/s and the CACO to ensure that personal objectives are in line with broader directorate and Trust audit initiatives.

2.2.5

Training for clinical staff

In 1999/2000, eight *Introduction to Clinical Audit* workshops were held at Barrow as part of the Staff Development Programme. Feedback from staff attending these courses (around 160 in total) has been extremely positive. One recent attendee commented that "The Clinical Audit workshops are amongst the best training workshops at UBHT". We are currently conducting a 6 month follow-up exercise to find out whether staff have had an opportunity to put their training into practice. In March 2000 a new workshop was launched. *Taking Clinical Audit a Stage Further* is also part of the SDP and focuses on the use of data, communicating results of audit and implementing change. Both workshops will continue to run throughout 2000/1.

Many directorates now have their own audit training days (for SHOs in particular) and audit is frequently included in general staff induction.

2.2.6

Auditing Audit

In 1998/9 we used the HSMC's *Clinical Audit Assessment Framework* (Walshe & Spurgeon, 1997) to evaluate local arrangements for clinical audit and as a result identified a number of deficits in our audit programme (see last year's report) which we have taken steps to address.

In 1999/2000 we went a step further and developed the themes of the HSMC framework into a more locally relevant tool (see Appendix I). The Clinical Audit Co-ordinator used the new tool to carry out a series of review meetings with facilitators and convenors in each directorate. A number of key themes emerged from these reviews:

Positive messages:

- **Broad Coverage.** The CA programme now appears to encompass almost all clinical specialties and sub-specialties.
- **Clinical Governance Links.** Many directorates now have Clinical Governance Committees in place, providing a natural forum for linking audit with risk management and complaints issues.
- **Audit Presentations.** Almost all directorates have regular audit presentation meetings/afternoons. These range from monthly to four-monthly according to directorate. However, a number of directorates noted problems with nursing staff and PAMs lacking protected time to attend these meetings.
- **Involvement of Management.** Hospital Managers play a role in the CA programme in a number of directorates.

Areas needing attention:

- **Local Steering Groups.** At the time the reviews were undertaken 4/14 clinical directorates did not have a local group, committee or equivalent to oversee the progress of their audit programme. This problem is currently being addressed.

- **Use of Proposal Forms.** Directorates that adhere to the proposal form system appear to have more thoroughly planned audit than those that don't. Since the reviews, the CAC has ruled that proposal forms must be completed and approved prior to the commencement of any audit projects that involve the use of Trust audit resources.
- **Topic Selection.** The process of identifying audit topics in most directorates continues to be more reactionary than planned – 'firefighting' problems as they emerge. Topics also - naturally enough – tend to reflect the personal interests of individual clinicians. Quality Impact Analysis has been used to some effect in identifying potential projects at directorate level, however the overall approach to planning remains rather 'ad hoc' with directorates not always adhering to forward plans. There is also little evidence of planning being guided by local performance targets agreed with Avon Health (e.g. re-audit, involving consumers, etc). This was arguably the most disappointing aspect of the reviews.
- **IT Systems.** CA continues to be hampered by lack IT limitations, although five directorates recognised that there was untapped scope for using the MDI system. The 'IT issue' will ultimately only be resolved with the forthcoming systems procurement and EPR.
- **Implementing Change.** The majority of directorates do not have a system for ensuring that recommendations are agreed (if appropriate) following the presentation of audit results, and that action plans are followed through. This problem is currently being addressed.
- **Patient Involvement.** Lack of patient involvement (apart from participation surveys) in CA continues to be an issue for all NHS Trusts.

Directorates were also asked about the things they felt improved the chances of audit projects leading to positive change. Here are some of their comments:

- Motivated and enthusiastic clinical lead
- Choose topics with potential for change
- Focus on clinical risk issues
- Keep project tightly focused
- Whole team consulted in planning
- Planning must include setting standards
- If changes can be implemented easily

As a result of the review meetings, action plans were agreed with each directorate for the next 12 months. These will be reviewed during 2000/1.

2.2.7 Performance Targets

Following discussions with Avon Health Authority, a series of clinical audit performance targets were introduced for the first time in 1999/2000. These targets are shown in the table on the next page along with an indication of the Trust's current (and where available, past) performance. The two columns for 1999/2000 represent different ways of calculating our performance: the first column (1) includes only those projects which were part of the 1999/2000 audit programme; the second (2) includes outstanding projects from 1998/9 which were rolled-over into 1999/2000.

UBHT Clinical Audit Report 1999/2000

	1998/9 1	1998/9 2	1999/2000 target	1999/2000 1	1999/2000 2	2000/2001 target	Ideal
Project source:							
Total number of audit projects	194	240	N/A	199	261	N/A*	N/A*
% new projects	71%	57%	65%	67%	72%		65%
% re-audits	15%	13%	25%	16%	15%		25%
% continuous monitoring	14%	11%	10%	17%	13%		10%
% projects rolled forward from 1997/8	N/A	19%	N/A	N/A	24%		N/A
% projects comparing current practice with standards or guidelines based on external evidence of clinical effectiveness	55%	58%	60%	49%	50%		75%
% projects measuring against or resulting in the development of standards or guidelines	81%	79%	80%	80%	80%		100%
% interface projects*	9%	10%	10%	12%	13%		N/A#
% proposals derived from consumer views	Data not available		N/A+	1%~	1%~	N/A+	N/A+
% projects including consumer views	Data not available		N/A+	13%	16%	N/A+	N/A+

Outcomes:

% projects resulting in changes in practice	61%	58%	60%	65%	66%		75%
% projects producing measurable benefits for patients	35%	36%	40%	48%	48%		75%

* The CAC is committed to the principle of supporting smaller 'grassroots' audit projects in addition to larger nationally-driven projects. It is therefore felt to be inappropriate to set specific targets in this area.

Dependent on future developments with PCAG & PCGs

+ It is recognised that consumer involvement is becoming a priority for clinical audit, however in view of the fact that this is a developing area, specific targets have not been set.

~ completed re-audits & continuous projects only

Note: 2000/1 targets to be agreed by CAC

2.2.8 Clinical Effectiveness & Evidence Based Practice

Continued collaboration on Clinical Effectiveness (CE) issues has fostered closer links between CA and R&D (Research & Development) in 1999/2000. James Osborne, CA facilitator for Pathology, is currently on a part-time secondment to develop a CE website for the Trust (see Appendix M). It is hoped that this site will be used as a front page for the Clinical Workstations which have been rolled out across the Trust in the last 12 months. It is hoped that the year ahead will see audit staff contributing to CASP (Critical Appraisal) training and local clinical guideline development (A Clinical Governance Annual Report will be published in the autumn of 2000, providing a full account of CE progress).

2.2.9

Quality and Consumer Involvement

The issue of consumer involvement in clinical audit was formally debated by the CAC in June 1999. Discussion centred on the difficulties associated with getting direct consumer input into audit committees and projects (and the question of how representative the views of individual consumers are). It has been agreed that the way forward is to develop links with consumers through the *Feedback* magazine. The format of *Feedback* has been broadened to include articles on audit and R&D. The plan is to use the magazine as a filter for ideas from consumers – ideas which can then be directed as appropriate towards the CIU (Consumer Involvement & Information Unit), Clinical Audit, R&D or Complaints. An information board will tour the entrances of UBHT hospitals in 2000 ‘advertising’ the work of CIU, audit and R&D.

Clinical audit continues to be represented on the Trust’s Quality & Consumer Committee, ensuring links with broader quality initiatives being undertaken within the Trust.

2.2.10

Audit prizes

The second UBHT Clinical Audit ‘Oscars’ were held in March 2000. This event – a showcase for the best audit work in the Trust during the preceding year – continues to be supported by the Special Trustees who once again provided cash prizes for the winning projects. First prize was claimed by Christine Perry for an audit of Infection Control (see paragraph 3.16.1), Second prize was awarded to Vasia Kavadas for an audit of Anastomotic Stricture following Oesophagectomy (see paragraph 3.19.1).

2.2.11

National conference

The two winning projects from the 1999 ‘Oscars’ event – Prevention of Secondary MI, and Inappropriate Requesting of Thyroid Function Tests – were both accepted as poster presentations for the inaugural NICE (National Institute for Clinical Excellence) conference in Harrogate, along with a third UBHT project, Detection of Radiographic Abnormalities in A&E.

2.2.12

Clinical Audit Website

The Trust’s Clinical Audit web pages are now fully developed and include information about local audit resources as well audit education materials and copies of recently published reports.

2.2.13

IM&T Procurement

Clinical audit representatives have continued to participate in the Procurement process for the planned EDS replacement in 2002. Caroline Daley (MDI Co-ordinator) has in particular taken a lead in developing a set of criteria which should be met by any replacement for the MDI. The CAC has recently been approached about the possibility of the Committee taking responsibility for ensuring that these criteria are applied to the purchase of any ‘off-the-shelf’ information systems / clinical databases purchased within the Trust for the purpose of clinical audit in the interim period leading up to the Procurement. The CAC is due to discuss this issue at the start of 2000/1.

2.2.14

Audit Server

An audit server has recently been purchased with the assistance IM&T. This ensures that clinical audit data is securely backed-up to a central point in the Trust. Staff can, if they choose, work directly from the server, guaranteeing confidentiality of data in the unfortunate event of the theft of a local workstation. A further benefit of the server is that the CACO can quickly access local project files via the network in the event of a member of the team leaving or having prolonged absence from work.

Chris Swonnell
Clinical Audit Co-ordinator

3. Project Reports for 1999/2000

3.1 Contracted audits

3.1.1

Audit of paediatric cardiac surgery

A separate report will be published by the Children's Hospital later in 2000.

3.1.2

Audit of adult cardiac surgery

See paragraphs 3.5.2 – 3.5.14 inclusive.

3.1.3

Audit of colorectal cancer using Calman standards

The database for this project has recently been received (April 2000) from Avon Health and moves are now being made to establish it on appropriate computers so that data collection can commence.

3.1.4

Audit of breast cancer using Calman standards

See paragraph 3.19.11.

3.1.5

RCP National Sentinel Audit of Stroke

See paragraphs 3.11.14/15.

3.1.6

Audit of referrals to and outcomes of diabetic retinopathy screening

See Appendix C.

3.1.7

At least 2 interface audits with Avon Ambulance Trust

In 1999/2000 we have again experienced difficulties in establishing a dialogue with AAT about interface audit. In 2000/1 it is hoped that AAT will be in a position to contribute to work currently being undertaken in CCU on thrombolysis times for patients with suspected acute MI (see paragraph 3.5.16).

3.1.8

At least 2 primary interface audits in collaboration with Avon PCAG.

Later changed to:

Support local PCGs in the development of clinical governance in each of their two chosen topic areas*

In 1999/2000 UBHT undertook two major projects in conjunction with Avon PCAG (see paragraphs 3.5.17 & 3.19.3). In addition, the Clinical Audit Central Office has extended an offer of support to each of the PCGs linked to UBHT (i.e. Bristol Inner City, Bristol South, Bristol South East & Bristol West).

* Avon PCGs have been asked to identify two governance topics to develop – one national and one local.

3.2 Summary statistics

Directorate	Total number of projects	New projects*	Re-audits*	Multi-Disciplinary*	Interface*	Standards - measuring or development*	Use of evidence in standards*	Risk Mgmt*	VFM*	Patients Views*	Changes in practice ~	Measurable benefits to patients #
Cardiothoracic Services	18	50%	11%	50%	11%	83%	44%	28%	22%	22%	55%	86%
Children's Services	15	87%	13%	47%	7%	87%	67%	80%	33%	27%	25%	0%
Community Services	25	68%	24%	48%	48%	84%	48%	56%	44%	12%	81%	100%
Critical Care	26	62%	19%	42%	4%	81%	31%	46%	12%	4%	71%	56%
Dental Services	18	67%	22%	33%	28%	89%	44%	33%	33%	22%	69%	80%
Homeopathy	8	50%	13%	13%	0%	75%	38%	13%	25%	13%	50%	0%
Medicine	30	80%	17%	50%	13%	80%	63%	57%	37%	17%	53%	0%
Obs, Gynae & ENT	19	95%	0%	32%	0%	89%	74%	79%	47%	21%	73%	100%
Occupational Health	6	67%	0%	67%	0%	33%	17%	100%	67%	100%	67%	50%
Oncology	14	93%	7%	21%	0%	100%	86%	7%	29%	7%	90%	100%
Ophthalmology	14	64%	29%	29%	21%	100%	50%	57%	36%	0%	89%	25%
Pathology	13	54%	23%	85%	0%	69%	31%	46%	15%	0%	77%	17%
Radiology	15	87%	13%	73%	7%	87%	60%	53%	53%	7%	58%	0%
Specialty Services	10	40%	30%	30%	20%	70%	20%	60%	50%	20%	71%	25%
Surgery	26	85%	4%	54%	15%	58%	46%	8%	4%	27%	33%	50%
Trust-wide	4	50%	25%	50%	0%	100%	75%	50%	50%	25%	100%	0%
TOTAL	261	72%	15%	46%	13%	81%	51%	46%	31%	17%	66%	46%

* includes 1998/9 rollovers

~ does not include 'current' projects

calculation based on completed re-audits and ongoing monitoring projects only – see below

IMPORTANT NOTE: Many projects will have led to real benefits for patients or the organisation as a whole, however the final column in this table reflects only those instances where such benefits have been confirmed by formally closing the audit loop (rather than from anecdotal information, for example). Similarly, projects which offer *potential* benefits for patients (paragraph 3.5.7 is an example) are not included in this total.

3.3 Key themes

Cancer Care, Clinical Risk Management and Patient Involvement have been three major areas of interest in 1999/2001. The tables below refer to paragraphs in this report which contain information about related projects.

Cancer Care

3.6.2	3.9.6	3.9.8	3.12.15	3.12.19	3.14.1 – 3.14.14		3.18.6	3.18.8
3.19.5	3.19.7	3.19.11	3.19.12	3.19.13	3.19.1	3.19.14	3.19.23	3.19.15
3.19.6								

Patient Involvement (including surveys)

3.4.2	3.5.1	3.5.4	3.5.15	3.6.5	3.6.6	3.6.12	3.6.14	3.7.2
3.7.23	3.8.13	3.9.6	3.9.3	3.9.10	3.9.2	3.10.6	3.11.22	3.11.10
3.11.28	3.12.8	3.12.1	3.12.13	3.14.14	3.18.2	3.19.6	3.19.3	3.19.21
3.19.25	3.19.11	3.19.19	3.19.8	3.11.9	3.7.1			

Clinical Risk Management

3.4.1	3.4.3	3.5.3	3.5.7	3.5.9	3.5.12	3.6.7	3.6.11	3.6.12
3.6.9	3.6.4	3.6.1	3.6.2	3.6.5	3.6.10	3.6.6	3.6.8	3.6.14
3.7.9	3.7.10	3.7.1	3.7.12	3.7.13	3.7.2	3.7.15	3.7.17	3.7.18
3.8.3	3.8.5	3.8.6	3.8.7	3.8.8	3.8.9	3.8.15	3.8.22	3.9.4
3.9.6	3.9.3	3.9.1	3.9.16	3.10.8	3.11.29	3.11.14	3.11.5	3.11.22
3.11.10	3.11.13	3.11.15	3.11.4	3.11.8	3.11.9	3.11.7	3.11.6	3.11.25
3.11.3	3.11.20	3.11.1	3.12.6	3.12.3	3.12.2	3.12.17	3.12.7	3.12.10
3.12.11	3.14.5	3.15.4	3.15.3	3.15.1	3.15.2	3.15.6	3.15.9	3.15.13
3.16.8	3.16.5	3.16.6	3.16.9	3.16.2	3.16.1	3.17.5	3.17.7	3.17.11
3.17.12	3.17.13	3.17.15	3.19.17	3.19.5	3.18.1	3.18.2	3.18.5	3.18.7
3.7.4	3.17.10	3.15.14	3.12.18	3.9.7	3.7.21			

3.4 Trust-wide audits

Key:

1998/9 roll-overs ◀◀

New audits ■

Re-audits ●

Ongoing monitoring projects ▶▶

Current (i.e. uncompleted) audits ▶

3.4.1

Are patients' case notes being maintained to the standard required by the Clinical Negligence Scheme for Trusts (CNST)? ▶

Tracey Jones

Accurate record keeping is essential practice in high quality healthcare. The clinical record acts as an accurate representation of a patient's medical history and allows for continued care without unnecessary duplication. The medical record is also essential evidence in litigation cases.

This audit considered the following aspects of record-keeping: presentation, identification of patient, chronology, legibility, dating and signing of all entries, filing of results and reports, appropriate information recorded on prescription charts and discharge summaries.

A re-audit of approximately 400 notes selected from high risk specialties across the Trust was undertaken during September to November 1999. A report on this was submitted as evidence for an application for Level 2 CNST status, which was subsequently gained. Summaries are currently being prepared for directorates to highlight areas showing excellent practice, and where deficits are currently occurring. Recommendations will be drawn from these and discussed with the individual directorates (General Managers, Clinical Directors, Medical Records Managers). Recommendations and an Action Plan for ensuring appropriate filing of paperwork (e.g. test results) in patient notes have been written and disseminated by the Trust Medical Records Manager.

CNST have subsequently asked the Trust to act as a reference site for good practice in auditing the quality of record keeping.

3.4.2

Can we establish Trust-wide standards for handling bereavement? ◀

Marjorie Ball, Clinical Governance Support Manager

Following an extensive audit/consultation across directorates, a paper was presented presented to the QCC in May 1999, outlining the following outcomes areas for action:

- Standardised policy/guidelines on bereavement
- Hand-outs/information for relatives
- Raising awareness generally and of resources already available in the Trust
- Improving training to nurses, junior doctors, porters and receptionists
- Improvements to Viewing Room
- Improving method of packing patients' belongings
- Ensuring medical records allow for immediate notification of a death to hospital depts where patient may have had an appointment
- Clear designation of quiet areas for relatives

A cross-directorate working party was set up June 1999 to look further at these issues. A draft bereavement policy has subsequently been produced and is currently going through a consultation process. The Bristol Children's Heart Action Group is also being consulted to ensure that concerns and issues arising from the Public Inquiry are taken into account. In recent months, donations have been received from Allied Carpets, John Lewis and the BRI League of Friends to enable improvements to the BRI Viewing Room to be carried out. A

UBHT Bereavement Resource Pack will be launched in the Autumn, accompanied by a comprehensive training initiative aimed at nurses, junior doctors, porters and receptionists.

3.4.3

Can we establish Trust-wide standards for the treatment and prevention of pressure sores? « »

Michaela Arrowsmith

In 1998/9 an initial fact-finding exercise revealed that only two areas of the Trust (BCH & BGH) were carrying out regular monitoring of pressure sores. Furthermore there were no clinical standards relating to pressure sores in any area. In 1999/2000 the Trust's multi-disciplinary Tissue Viability Group, has developed a guidance manual which will be made available to all staff within UBHT along with a wound dressings formulary in the form of a colour flow chart which will be available in every area. Prevalence reporting (a snapshot at a point in time) continues to be organised on a quarterly basis, however in 2000/1 it is planned to introduce a system of incidence monitoring.

Prevalence at BGH, BRI, BOC, BCH, St Michael's and Keynsham was audited over a two day period in June 1999 included. 526/627 (84%) patients were found to be at risk of developing pressure sores. 121 of these were at high risk. 166 pressure ulcers were found on 82 patients, i.e. 13% prevalence. 57% of sores originated in hospital (31% in patient's own home, 12% other). The cost of treating these pressure ulcers is conservatively calculated at £262,500. As a result of the audit £50,000 of pressure relieving equipment has been purchased by the Trust.

3.4.4

Mixed Sex Wards ■ »

Chris Swonnell

The Department of Health has laid down a number of ground rules about the use of mixed sex wards in hospitals. All trusts are being asked to comply with these standards by the beginning of 2001. Some of the standards are about the kinds of information made available to patients to explain about the use of mixed sex wards. An audit is therefore being undertaken in order to build up a picture of what information the Trust is already providing. Specifically this means a) any letters or information leaflets that are sent out to patients who are to be admitted to a mixed sex ward and b) any information available to patients once they have been admitted to the ward, explaining about being on a mixed sex ward.

ALSO SEE...

Medicine – "Implementation of Trust-wide nutrition standards" (3.11.3)

Pathology – "Are we meeting Trust-wide standards for Infection Control?" (3.16.1)

3.5 Directorate reports

CARDIOTHORACIC SERVICES

Important note: The Directorate of Cardiothoracic Services will be publishing a separate report later in 2000 which will include morbidity and mortality data for adult cardiac surgery and cardiology. A brief precis of the 1998/9 report is given in paragraph 3.5.3.

SUMMARY

Number of 1998/9 roll-overs ◀◀	0	
Number of new audits ■	9	
Number of re-audits ●	3	
Number of ongoing monitoring projects ▶▶	6	
Total number of audits	18	
Number of current (i.e. uncompleted) audits ▶	7	
	1998/9	1999/2000
Multidisciplinary audits	1/3 (33%)	9/18 (50%)
Interface audits	1/3 (33%)	2/18 (11%)
Audits measuring against or resulting in development of standards or guidelines	3/3 (100%)	15/18 (83%)
Audits involving standards or guidelines which have been/will be developed following consideration of available evidence about clinical effectiveness	3/3 (100%)	8/15 (53%)
Audits examining a Cost Effectiveness issue	-	4/18 (22%)
Audits examining a Risk Management issue	-	5/18 (28%)
Audits which directly involved patients	0/3 (0%)	4/18 (22%)
<i>(percentages above do <u>not</u> include 1998/9 roll-overs)</i>		
Audits resulting in changes in practice	2/3 (67%)	8/11 (73%)
<i>(percentages above include 1998/9 roll-overs, but not 1999/2000 'current' projects)</i>		
Resulting in measurable benefits for patients	1/1 (100%)	6/7 (86%)
<i>(percentages above include completed re-audits and ongoing projects only)</i>		

EXEMPLAR / INTERFACE AUDIT

3.5.1

Is the Cardiac Rehabilitation programme equitable and effective in secondary prevention measures and role restoration? ■

Sister Amanda Daniel

Cardiology

This project was shortlisted for UBHT's 1999/2000 'Audit Oscars'

This audit compared local practice with standards and clinical guidelines developed jointly by the Royal College of Nursing, the Cardiac Society and the Royal College of Physicians. Data was collected on 271 patients referred for cardiac rehabilitation between May 1998 and June 1999.

The aim of the audit was to determine whether the current MI cardiac rehabilitation programme is equitable and effective in delivering secondary prevention measures and role restoration. Standards (and results) included the following:

1. All MI patients referred to the cardiac rehabilitation team should be seen by a cardiac rehabilitation nurse (97% achieved)
2. All patients should be seen within 3-5 days of admission in order to receive up-to-date information relating to medical findings and proposed management (64% achieved)
3. All patients to have risk factors assessed, documented and clear advice given (100% of smokers were given clear advice about smoking cessation; 100% had BP taken; 100% had history of hypertension taken; 90% had cholesterol level checked; 100% had check on diabetic status, 100% had alcohol intake assessed, 100% had history of CHD checked)
4. All patients to have a simple formal assessment for depression/anxiety before discharge (76% achieved)

5. All post MI patients attending the exercise component of the outpatient programme to have a pre-discharge test unless contraindicated

Since the completion of the audit report the following progress has been made:

- Following liaison with the cardiologists, guidelines regarding risk stratification prior to attending the CRP have been circulated to all physicians.
- Posters illustrating the programme are displayed in the ward areas for patient information.
- Facilities for pre-discharge exercise testing (ETT) have been improved. The cardiac rehabilitation sisters can make recommendations/ request an ETT through the co-ordinator.
- Parke-Davis have been approached for funding a risk prevention nurse to develop secondary prevention clinics. Patients will be reviewed at 3, 6, 12months. A lifestyle management programme and laptop computer have already been purchased through the company. The software will simplify audit and allow rapid assessment.
- A patient held record card has been produced to improve communication with primary care regarding risk factors. (This is being included in a separate audit)
- A bid was submitted to the British Heart Foundation to fund a clinical psychologist in April 1999. This was unsuccessful. The Trust has been approached regarding this service. Consequently, there is limited access to a senior clinical psychologist within the cardiac directorate for 3 sessions per week.
- A patient satisfaction survey will be sent out in May 2000 to evaluate the service. Questions will include return to daily activities, programme logistics and reason for non-attendance.
- A healthy hearts exercise group was set up in July 1999 with the University of Bristol to maintain an active lifestyle in the community. Attendance and uptake has been audited by the University.

3.5.2

What are local morbidity and mortality rates in cardiac patients ≥ 80 years of age? ■ ▶

Sharif Al-Ruzzeh, Cardiothoracic SHO

Cardiac Surgery

This current project focuses on how long patients ≥ 80 are staying in ITU and HDU as a result of complications after surgery, with associated implications for bed turnover. Local morbidity and mortality data for this group of patients will be compared to that of patients below 80. Data including hospital days, ITU stay and ventilation times will be gathered from the PATS (Patient Analysis Tracking System) records of over 4,000 patients seen at the BRI between April 1996 and December 1999.

OTHER PROJECTS

Cardiac Surgery

3.5.3

Cardiac Surgery Annual Report 1998/9 ▶

Alan Bryan

A further year of comprehensive prospective data collection with respect to all adult cardiac surgical procedures has been completed. Overall, outcomes were better than the UK average. Analysis of risk stratified performance was better than expected for the market operator, CABG. There was no difference in performance between individual surgical firms. Local observation of surgical outcome by prospective audit has been used to monitor the introduction of new surgical techniques such as CABG without cardiopulmonary bypass, minimal access CABG and the Ross (Pulmonary Autograft) operation; there has been no observed detrimental effect on early outcome. Ample evidence exists from this data of under provision of cardiac surgery to the local population. It is hoped that the current Govt. initiative will address this problem.

3.5.4

Is the 5 day discharge target being met? ●

Graham Brant & Rebecca Lanyon

The department aims to provide safe effective discharge from cardiac surgery whilst reducing the average length of stay for all patients. 40% of patients are now discharged by Day 5 following cardiac surgery and 60% by day 6. Readmission based on PATS follow up data showed a rate of 1.4%. Overall, in the last 12 months the use of dedicated Discharge Co-ordinators has saved 0.9% bed days per patient and give patients a quality service as outlined in patient survey results.

3.5.5

Are patients being safely extubated by nurses? »

Sister Kathleen Gough

This continuous audit monitors whether patients are being safely and effectively extubated from a ventilatory support mode to self maintained ventilation as performed by nursing staff. Nurse initiated extubation is an extended role that was introduced to Ward 5B in 1996. It has resulted in a reduction in the time patients are intubated and decreases their stay in hospital.

3.5.6

Is the quality of documentation of ITU charts in Ward 5B being maintained? »

Janet Kew

This ongoing audit has shown a continual improvement towards the standards of 100% data collection. This has been achieved through communication and education of nursing staff.

3.5.7

Are mortality rates per Anaesthetist team within accepted rates? »

Steve Pryn

Part of the PATS data collection form calculates the Parsonnet score for patients. The 'Parsonnet score' is the risk of surgery for each patient. Death rates for each consultant team, based on the risk of mortality during or just after surgery, are compared with expected mortality rates on a quarterly basis. The audit has shown that high standards are continuing to be met.

3.5.8

Can wound infection rates in the sternum and mediasternum be reduced? ■ »

Dr I Kadir

Wound infection in the sternum and mediasternum are major causes of morbidity. We believe that meticulous attention to closure and post op management of chest drains will result in a decreased rate of infection. This is an audit of management techniques.

3.5.9

What is the relationship between haematocrit on admission to ICU following coronary surgery and postoperative MI and/or death? ■ »

Dr Alan Cohen Consultant Anaesthetist

Recent evidence suggests that higher haematocrit may be associated with poorer outcomes. This current audit examines whether this relationship exists in our own practice.

3.5.10

Quality of data provided for PATS »

Paul Dillon

The quality of data for the PATS database must be accurate, reliable and timely for audit and research and to enable discharge summaries to be sent out. An audit of the data was carried out per specialist team involved in patient care. This highlighted the fact that the quality of PATS data wasn't as good as should be expected and supported the idea that most of the data entry clerk's time was spent chasing this data. This will be a continual audit with the aim of getting 100% completion and accuracy. Further audits will be carried out, and the results publicised so as to improve the quality of data and the service we provide to GPs.

3.5.11

Characteristics of Cardiac patients with Diabetes »

Ward 5B

The aim of this audit was to see if any differences in treatment should be introduced for diabetic patients undergoing cardiac surgery. Data relating to Parsonnet Scores (risk), angina status, post-operative complication rates and length of stay were analysed for diabetic and non-diabetic patients seen during the year 1998/9. As expected, it was found that patients who were diabetic had higher Parsonnet scores but also their scoring for angina was also higher (both statistically significant). However there was no difference in their lengths of stay or postoperative complications. No changes in practice were therefore felt to be necessary.

3.5.12

Fast Track of Cardiac Patients after Surgery ■ ▶

Dr F Culli

The aim of this current audit is to identify characteristics of patients who are fast tracked through the cardiac unit (i.e. discharged quickly). The following data are being collected: 'Euro' and 'Parsonnet' scores, original diagnosis prior to surgery, ventilation time following surgery, reason if patient ventilated ≥ 4 hours, time in ward, length of operation.

3.5.13

Quality of Catheterisation data ● ▶

Jane Sims and Paul Dillon

An audit of PATS forms for November and December 1999 found that the quality of catheterisation data fell short of the required quality. Corrective measures were communicated and a re-audit is currently in progress.

3.5.14

What are the local mortality and morbidity rates for the Ross Procedure? ■

Isaac Kadir

The Ross Procedure is an alternative to Aortic Valve Replacement, especially in younger patients, and is associated with higher morbidity than conventional valve replacement. The Ross Procedure has recently been introduced into the BRI, and an audit of the first 30 patients undergoing the procedure was performed. Results were compared with that from the International Ross Registry and showed that both morbidity and mortality were comparable to published results. It was therefore recommended that the procedure should continue.

Cardiology

3.5.15

Audit of Exercise/Pain clinic ■

Hilary Portch

This brief interim (3 months) audit of the chest pain clinic was undertaken to provide senior staff and management with basic data about referral patterns.

3.5.16

Audit of Door to Needle times following suspected Acute Myocardial Infarction ■ ▶

Roger Owen

The Trust continues to strive to reduce thrombolysis times for patients with suspected acute MI. Data has been collected from PATS and patient casenotes and is currently being analysed. A copy of the results will be sent to the Avon Ambulance Trust with a view to collaboratively establishing a reliable method of monitoring *Call* and *Symptom* to Needle Times.

3.5.17

Are Myocardial Infarction patients receiving clinically effective treatment to prevent further infarcts? ● ▶

Dr Tim Cripps

Following a first audit and in conjunction with Cardiac Rehabilitation nurses, a patient held "co-op card" was developed and launched in September 1999. The timing of the exercise tests was also changed - these are now carried out on inpatients rather than at a later outpatient appointment. The standards used in the first audit are currently being reviewed in the light of the National Service Framework for Coronary Heart Disease. Patients are now being recruited for a re-audit which will ask questions about the usefulness of the co-op card as well as re-visiting areas covered previously. Data will again be collected from GPs, BRI notes and a patient questionnaire.

Thoracic Surgery

3.5.18

Audit of activity in Thoracic Surgery, 1999 ■

Mr Morgan Consultant and Mr Forrester-Wood Consultant

The audit looked at the annual workload of the Thoracic department together with lengths of stay, morbidity and mortality for the different procedures. The two consultant surgeons, together with nursing staff, physiotherapists and anaesthetists collected data on the each patient admitted to Ward 6 during 1999. Overall results show that the morbidity and mortality rates are within acceptable rates. The annual Society code returns and national averages were used as baseline standards. Further analysis is currently being carried out in an attempt to ascertain why the average length of stay for video assisted surgery patients is longer than expected (e.g. were patients particularly ill / in advanced stages of cancer?).

PROBLEMS ENCOUNTERED & LESSONS LEARNED

“Audit data is only as good as the time and effort which individuals put into collecting it. When the system works properly most cardiothoracic audits involve extracting data from the PATS system and analysing it, however a large proportion of audit support time is spent persuading medical staff to comply with data collection requirements. Fortunately we do have a number of committed consultants who support the need to obtain complete data. Getting individuals to complete audit proposal forms can also prove difficult.

As a consequence one of the lessons learned is that audit results are not made available until all the relevant paper work has been completed. Comparing groups against each other appears to help the quality of data in the short-term – the 'carrot and stick' approach to co-ordinating data collection.”

ALSO SEE...

Critical Care – “Epidurals in Thoracic Surgery” (3.8.9)

For Paediatric Cardiac Surgery / Cardiology, see **Children’s Services**

CHILDREN'S SERVICES

SUMMARY

Number of 1998/9 roll-overs ◀	4*
Number of new audits ■	13
Number of re-audits ●	2
Number of ongoing monitoring projects ▶	0
Total number of audits	15
Number of current (i.e. uncompleted) audits ▶	7

* 3 of these projects appear in Appendix C

	1998/9	1999/2000
Multidisciplinary audits	5/10 (50%)	7/15 (47%)
Interface audits	1/10 (10%)	1/15 (7%)
Audits measuring against or resulting in development of standards or guidelines	8/10 (80%)	13/15 (87%)
Audits involving standards or guidelines which have been/will be developed following consideration of available evidence about clinical effectiveness	5/10 (50%)	10/13 (77%)
Audits examining a Cost Effectiveness issue	-	5/15 (33%)
Audits examining a Risk Management issue	-	12/15 (80%)
Audits which directly involved patients	3/10 (30%)	4/15 (27%)
<i>(percentages above do not include 1998/9 roll-overs)</i>		
Audits resulting in changes in practice	5/13 (38%)	2/7 (29%)
<i>(percentages above include 1998/9 roll-overs, but not 1999/2000 'current' projects)</i>		
Resulting in measurable benefits for patients	0/3 (0%)	0/1 (0%)
<i>(percentages above include completed re-audits and ongoing projects only)</i>		

EXEMPLAR AUDITS

3.6.1

Audit of management and outcome of children with epilepsy ■ ▶

Dr Anna Barkley & Dr Giles Richardson

General Paediatrics

This project represented an attempt to establish local incidence of epilepsy amongst children - lack of diagnostic coding in outpatients has previously made this information difficult to estimate. It was also felt that an attempt should be made to establish if there was consensus amongst general Paediatricians regarding best practice in epilepsy care.

Specific objectives:

- To assess diagnosis of patient and management of epilepsy (to include investigations and treatment)
- To observe quality of outcome (patients should be seizure-free)
- To make recommendations with regard to achieving consensus on future care.
- To establish if relationship exists between seizure frequency and number of clinic visits.

The audit looked at the records of children who had a first referral for an EEG at BCH during 1997 and subsequently had a diagnosis of epilepsy. 329 new referrals were seen in this period. 325 notes were found and screened for epilepsy. 71 children had been diagnosed with epilepsy.

Standards and results:

1. All children should be given a specific diagnosis by one year - 85% achieved
2. All children where indicated should have an MRI scan - 88% achieved
3. All children where indicated should see a paediatric neurologist - 100% achieved

Four other standards related to prescribing, for example that all children should receive either Carbamazepine or Sodium Valproate as a first line drug (*exceptions* – Infantile Spasms and true petit mal). 20/21 children receiving medication met this standard, however 50/71 children were receiving no medication at the point they were referred to BCH.

Only 1/71 patient had a comment in their notes to indicate that they had received information about the Epilepsy Association – a Task Force recommendation (it subsequently transpired that clinical staff were giving verbal advice without documenting this fact).

Recommendations (yet to be ratified):

- Proformas for epilepsy management to facilitate prospective re-audit
- Consensus on a minimum data set
- Out patient diagnostic coding
- Improve audit outcomes especially those with poor compliance

3.6.2

Have infection rates in Oncology patients increased since changing to the Bionector system? ■

Dr Wen Chiang / Dr Amos Burke - Oncology Children's Services

Oncology

There are two different connector systems (bungs) that are used on the end of long lines used for venous access: one is accessed via a needle (Click Locks), whilst the other system (Bionector) is needle-less. The Oncology Department switched to using Bionector in November 1999 because of potential cost benefits. Anecdotally, however, it was felt that infection rates had increased since the change in bungs - hence the reason for this audit.

Data was collected retrospectively from the notes of 48 local Bristol patients seen at BCH over a period of one year. Results indicated that approximately twice the number of infections per 1000 catheter days occurred during the period of Bionector use, when compared to previous Click Lock use. However the increase in infections was not accounted for by a significant increase in any one organism.

The Oncology Department has now switched back to using the Click Locks system. Infection rates will be audited prospectively for the next six months. Procedures for assessing lines have been revised and updated.

OTHER PROJECTS

A&E

3.6.3

Is attendance at A&E being inappropriately used as an alternative to Primary Care? ■

Dr Lisa Goldsworthy & Dr Sarj Mehta

Staff in A&E had become aware that a seemingly high percentage of patients presenting at A&E were self-referred medical cases. The question therefore arose whether the service was being used as an inappropriate alternative to primary care. A survey was undertaken whereby doctors and nurses asked parents questions about the background to their child's attendance at A&E. Questions included "Have you seen your GP about this problem?", "Why did you decide to come to A&E on this occasion [rather than seeing your GP]?". 169 questionnaires were filled in over a four week period. Analysis of feedback indicated that as many admissions were generated from self referred medical children as from GP referral. Approximately 50% of cases had not sought medical advice prior to attending A&E. The most common reason for attending was for a second opinion. Results from this project have been presented to the GP Trust Advisory Group however it is accepted that there is no quick resolution to the problem. A re-audit will be undertaken next year to monitor the situation.

Anaesthesia

3.6.4

What is the incidence of post-operative problems following Tracheo Oesophageal Fistula/Atresia? Is there any correlation with anaesthetic technique? ■ ▶

Dr Rob Law, Fellow

This pre-audit was prompted by impressions of problems in the post-operative period.

Cardiac Services

3.6.5

How satisfied are patients with the care received before, during and after cardiac catheterisation? ■

Connie Wakley, Senior Nurse, Cardiology

This survey covered a wide range of topics from facilities to the usefulness of information. A questionnaire was sent to parents of children seen at the Cardiology Department at BCH.

ENT

3.6.6

Is early discharge possible for children undergoing tonsillectomy? ● ▶

Mr Griffiths & Hayley Brooks

An audit was undertaken in 1998/9 order to ascertain whether – hypothetically – children could be discharged at 6 hours. 50% of the cases examined would have been fit for discharge. The question of whether early discharge is feasible remains under discussion and a re-audit is currently being conducted.

3.6.7

Are primary bleeding rates for tonsillectomies within national (RCS) standards? ■

Mr Angus Waddell, ENT SpR

This audit was undertaken to establish local rate of reactionary haemorrhage and identify causal factors of a suspected recent rise in this complication. Results indicated a haemorrhage rate of 1.47% rate (23/1561). i.e. within acceptable limits laid down by the Royal College of Surgeons. Although this represented a rise in the local complication rate, no specific causes could be identified.

General Paediatrics

3.6.8

Are accepted Hand Disinfection Practice during Patient Examination being followed? ■

Miss L Huskisson & Dr Nadeem Haider

Nosocomial infections are responsible for huge costs to the NHS. The aim of this audit was to observe compliance with hand washing during routine patient management and compare results with published literature. Observational Prospective Study (Blinded) was carried out at BCH and St Michael's Hospital over a 45 day period. 276 Patient contacts were recorded. Overall compliance with acceptable handwashing practice was 63%, i.e. better than published data but short of a target of 100%. It was noted that senior level compliance was better than junior level compliance. The following recommendations were made:

- Improve provision of disinfecting solution
- More than one type of disinfectant may help improve the compliance
- Continuing motivation, lectures, brochures, slogans, films etc.
- Provision of appropriate facilities in the wards
- Regular demonstration of proper handwashing techniques
- Visual reminders
- Suitable input from infection control teams
- Parental awareness and pressure/involvement
- Importance to be stressed in induction lectures/theatres/ICUs

Hearing Assessment

3.6.9

Are children with Meningitis being referred to Hearing Assessment within national 4 week standard? ■ ▶

Dr Tim Williamson, Consultant Paediatrician

Patients with Meningitis often experience associated hearing difficulties. The purpose of this audit was to establish the internal referral rate for hearing tests for children with meningitis and the length of time from the onset of meningitis to the hearing test (national standard says that all children with meningitis should be referred for a hearing test within four weeks of admission). 41 children were identified as having been admitted to BCH with meningitis

between January 1996 and May 1999 inclusive. 34 (83%) were referred for hearing assessment, although two of these patients were subsequently not tested. Only 25% (8/32) were tested within 4 weeks of referral. As a consequence of the audit, the following recommendations were made (not actioned yet):

- To test more children before discharge - avoids losing captive population
- Review referral policy
- Highlight issue with new SHO's at induction teaching sessions
- Re audit in the future

Intensive Care

3.6.10

Could the level of drug errors in PICU be reduced by introducing a new prescribing system? ■ ▶

Pat Weir, Consultant Intensivist

For a number of years there has been an interest in implementing a new prescription system in PICU. It was therefore agreed to carry out a prospective audit of drug errors (i.e. dose errors, transcription errors, timing errors, failure to sign a prescription etc), implement a new system and then re-audit error rates. The framework for the audit was taken from a similar audit carried by Graham Stuart, a Cardiologist from Wales. The first stage of the audit has recently been completed and reported errors were comparable with the original Welsh study.

Neonatology

3.6.11

Are we managing gas exchange properly during transfer to and from theatre? ■ ▶

Dr Olga Kappelou

Low PCO₂ levels reduce cerebral blood flow and are associated with periventricular leucomalacia in ventilated babies. The aim of this audit was to establish whether neonates transferred to theatre in BCH from other hospitals in the region have unacceptably low or high PCO₂ levels. It was agreed that PCO₂ levels on arrival to the unit should be above 35mm/Hg and below 55 mm/Hg (exceptions: Chronic Lung Disease babies). Furthermore blood gas analysis should be undertaken within 60 minutes of arrival on the unit. The care of 29 babies was retrospectively reviewed. 21% were found to have PCO₂ levels < 35mm/Hg. 22% of babies had PCO₂ levels > 55mm/Hg. 83% of babies had gas analysis undertaken within 60 minutes of arrival to the unit. In discussing the results of the audit it was accepted that the sample for this was too small to be statistically significant, however the following recommendations are to be discussed by a newly formed Neonatal working party, including Anaesthetists, Surgeons and Neonatologists:

- To improve post operative monitoring on the unit
- To improve communication with anaesthetist during management of ventilation in theatre

3.6.12

Do transferred neonates have unacceptably low PCO₂ levels on arrival at theatre? ■ ▶

Dr S Gupta & Dr M Thoreson, NICU

This audit looked at PCO₂ levels in children being moved within BCH. Results showed that PCO₂ levels were above 30mm of Hg in only 69% of cases (100% standard). Furthermore blood gas analysis was undertaken within 60 minutes of arrival in only 60% of cases (100% standard). A working party has been established to consider the following recommendations: a) portable gas analysis for transfers, and b) staff education about the need for gas analysis within an hour of arrival

3.6.13

Is Patent Ductus Arteriosus being managed appropriately? ■

Dr Rajiv Barodia

Ductus Arteriosus is the blood vessel in the fetus through which blood passes from the pulmonary artery to the aorta, thereby bypassing the lungs, which do not function during intra-uterine life. PDA occurs when duct continues to function after birth. The treatment protocol for the management of PDA is a stepwise progression with reassessment for duct closure and persistence of the duct at each step. This audit was prompted by concerns that step 1 was not being followed and that step 2 was being started soon after the discovery of PDA. The

objective was to monitor the management and outcome of conservative and surgically treated cases, and reach consensus on any appropriate changes to the protocol. Results showed that the stepwise approach was followed in 47% of babies (n=35). This audit confirmed that pre-term babies with gestation less than 26 weeks form the largest group presenting with PDA. This group required more surfactant, longer ventilation and oxygen therapy. Research comparing surgical versus Indomethacin treatment especially in very tiny babies is urgently needed and if new protocols are subsequently developed, a re-audit will help in comparing the effectiveness of these two different protocols.

Play Department

3.6.14

What is the quality of play provision within Children's Services? ●

Elaine Eastman, Play Supervisor

This topic was once again re-audited in 1999/2000, looking at play provision in designated play spaces (supervised and unsupervised, indoors and outdoors). Data collection focused on cleanliness and safety, appropriate resources, play delivery, information provision, parents perception. There are 20 areas within the hospital where play occurs, 18 of which are designated for this purpose. Whilst some aspects of care had improved since 1998/8 (e.g. parents' opinion of service, information provision and play prep), other areas had fallen back (typically unsupervised areas). Recommendations:

- Named link play worker
- Monitor bank system
- A&E / Outpatient area (unsupervised)
- Maintenance of second hand toys
- More play workers

Respiratology

3.6.15

NATIONAL AUDIT

How does BCH practice for admission, treatment and discharge of acute asthma patients compare with national data? (National Asthma Audit, Glasgow)? ■

Dr Simon Langton Hewer & Dr Reg Bragonnier

This retrospective case note audit of all admissions in November 1998 involved doctors from all general paediatric firms admitting asthma patients. Results showed that whilst BCH generally admitted sicker patients requiring more intensive treatment than the national norm, admission times nevertheless remained in line with national averages. BCH results were however disappointing in the area of discharge planning. Following the audit it has been recommended that an asthma stamp be introduced for casenotes.

ALSO SEE...

Dental Services – “How good is the dental health of children attending cardiology outpatient clinics?” (3.9.3); “Are patients and parents satisfied with the paediatric dental service?” (3.9.2)

Critical Care – “Are children experiencing acute pain following major surgery?” (3.8.4)

Radiology – “How appropriate are requests for erect abdomen radiographs in paediatric radiology?” (3.17.11)

Specialty Services – “How long does it take the BCH Pharmacy Department to dispense TTAs and what is the error rate detected in the prescribing?” (3.18.5)

COMMUNITY SERVICES

SUMMARY

Number of 1998/9 roll-overs ◀	11*
Number of new audits ■	12
Number of re-audits ●	3
Number of ongoing monitoring projects ▶	0
Total number of audits	25
Number of current (i.e. uncompleted) audits ▶	9

* 1 of these projects appears in Appendix C

	1998/9	1999/2000
Multidisciplinary audits	5/11 (45%)	8/15 (53%)
Interface audits	1/11 (9%)	8/15 (53%)
Audits measuring against or resulting in development of standards or guidelines	7/11 (64%)	14/15 (93%)
Audits involving standards or guidelines which have been/will be developed following consideration of available evidence about clinical effectiveness	2/11 (18%)	9/14 (64%)
Audits examining a Cost Effectiveness issue	-	6/15 (40%)
Audits examining a Risk Management issue	-	8/15 (53%)
Audits which directly involved patients <i>(percentages above do not include 1998/9 roll-overs)</i>	1/11 (9%)	3/15 (20%)
Audits resulting in changes in practice <i>(percentages above include 1998/9 roll-overs, but not 1999/2000 'current' projects)</i>	3/7 (43%)	13/16 (81%)
Resulting in measurable benefits for patients <i>(percentages above include completed re-audits and ongoing projects only)</i>	0/0 (-%)	2/2 (100%)

EXEMPLAR AUDITS

3.7.1 & 3.7.2**Evaluation of the Early Discharge & Acute Response Team Winter 1998/9 & 1999/2000**

◀ ● ▶

Helén Lockett, Assistant Manager, Central Health Clinic

In 1998/9 this audit showed that the work of the ART and EDT in dealing with winter pressures in 1998/9 had saved 2085 bed days with high levels of patient and GP satisfaction.

Avon Health have once again funded an EDT / ART Team in 1999/2000 (running from December 1999 to end of March 2000). The team is multi disciplinary, including a District Nurse Team, O/Ts and Physiotherapists. There has been close working with Social Services and an allocated Home Aide team. The objective of the EDT is to provide an intensive package of care to facilitate an earlier discharge of appropriate patients, in order to reduce pressure on the demand for hospital beds. The objective of the ART is to provide short term intensive packages of 24 hour care, by a team of D/N's, O/T's and Physios, to maintain patients at home and defer hospital admissions.

This year's audit seeks to measure how the service met our expectations and those of our patients via patient, staff, and GP questionnaires. From this information, we will be able to ascertain how successful we have been in dealing with winter pressures, and how satisfied our patients and GPs have been with the service. It may also highlight ways in which the service could be improved if money is made available for the service next winter. Data is being collected currently

3.7.3

Are patients wounds being assessed and documented correctly? ● ▶

Gail Powell, District Nurse, Knowle Clinic

Wound care forms a very large part of every District Nurse's caseload. The Directorate carried an audit in 1998/9 which highlighted a lack of use of a wound assessment tool. A standard was subsequently written and a wound care tool re-designed to include body and feet drawings, together with assessment questions. Use of the tool is currently being audited to assess how effective it has been in encouraging correct wound assessment. The original audit also highlighted an educational need which is now being addressed via a rolling programme.

Sources of evidence:

- Tissue Viability Group January 2000.
- Wound Care Society Assessment of Wounds Educational leaflet.
- Practical Framework for Wound Assessment. British Journal of Nursing 1997 Vol. 6, No 1. Madeleine Flanagan.

OTHER PROJECTS

3.7.4

How prevalent are pressure sores in patients seen in the community and how are those sores being treated? ◀

Jane Alder, Professional Lead for District Nursing

This project was undertaken to investigate the prevalence of sacral and heel pressure sores in patients seen by District Nurses and Podiatrists in the community, to identify the origin of the sores (hospital or community) and ascertain whether patients are using appropriate pressure-relieving equipment. Data was collected during March 1999. 52 patients were found to have sores – 32 (62%) had started their sores in the community. The audit highlighted a shortage of pressure-relieving equipment and raised the question of whether staff fill in clinical risk reporting forms if appropriate mattresses are not available for patients. Further audits are being planned to establish duration of episodes of care and patterns of use of equipment.

3.7.5

Do Community Nurses carry out comprehensive assessments of Urinary Incontinence? ■

Angela Perrett, Continence Advisor, Central Health Clinic

Following an Audit Commission visit in January 1999 it was recommended that a review of the quality of continence assessment be undertaken. The subsequent audit examined record keeping by health visitors and district nurses for assessment of incontinence. The notes of 140 elderly patients were audited. The quality of information recorded varied considerably across the directorate. The majority of assessments did not meet 'must do' criteria identified by Cheater *et al* (national standard). Directorate-wide local standards for assessment are now being discussed and a working party is being established to look at diagnosis and treatment plans. Assessment training workshops have been organised and a re-audit is planned for 2000/1.

3.7.6

What interventions are being used to unblock or manage blocked catheters? ◀ ▶

Angela Perrett, Continence Advisor, Central Health Clinic

Blocked catheters are a common cause of District Nurse call-outs. This project (initiated at Southmead Hospital) suffered from poor questionnaire design which has affected the validity of the results. Southmead staff are nevertheless in the process of reviewing data from both Trusts (113 UBHT patients) with a view to developing service standards.

3.7.7

Are patients receiving appropriate management for indwelling catheters? ◀ ▶

Angela Perrett, Continence Advisor, CHC

The aim of this audit is to review the current practice in relation to the management of indwelling catheters. It is hoped to:

- Identify broad categories of patients with catheters

- Identify how often catheters are changed and reasons for change i.e. routine, blocked catheters etc.
- Identify how prevalent is the testing of urine pH in catheterised patients
- Identify the use of bladder washouts, and reasons for their use.

This audit is being carried out in conjunction with Southmead Urology Department, and there have been delays in data collection from them. UBHT data has been collected, but it has not yet been analysed. Evidence based Standards will be set on completion of the audit.

3.7.8

What are the leg ulcer management training needs of community nurses? ■

Jane Alder (Professional Lead for District Nursing) & Karen Gay (Care Pathways Project Nurse)

This audit aimed to establish any unmet training needs in the assessment and management of patients with leg ulcers. A questionnaire was sent to 163 District Nurses and 56 Treatment Room Nurses, resulting in a 55% response rate. As a consequence of the audit, three more staff are being funded undertake a nationally recognised leg ulcer course (ENB N18). A re-audit is due to take place in June 2000.

3.7.9

Are 'bank' staff given enough information and equipment to perform their job? « ▶

Karen Cole (Bank Nurse Manager) & Rosaleen Cooper (Associate Community Manager)

Two questionnaires were sent out: one to District Nurses in bases, another to Bank Nurses. Feedback highlighted potential areas for improvement. A group of interested staff is being convened to formulate standards around the issues of communication, documentation and equipment availability. A re-audit is planned for the future.

3.7.10

Are we providing high quality, cost-effective assessments? «

Jess Dougal, Associate General Manager

Historically G-grade District Nurses completed a holistic assessment for each initial contact. The process of using G-grades was extremely time-consuming and the benefits were questionable. A change of practice was introduced to enable 'E' grade nurses to carry out this task, however anecdotal feedback suggested that the change was unpopular with some 'G' grades. A survey was therefore undertaken to gauge the views of both sets of staff. This revealed that 'G' grade staff were happy for 'E' grades to carry out assessments if they were in possession of adequate referral information. New assessment forms have therefore been introduced. The benefit to patients is that their assessments take place sooner, and care, equipment and further referral are expedited.

3.7.11

Use of Nursing Care Codes ■

Helen Lockett, Assistant Manager, CHC

Local development of Nursing Care Codes (NCCs) has followed the recommendations of an Audit Commission Report in 1999. NCCs describe packages of care and are designed to assist District Nurses (previously DNs had to list many individual codes to describe each act they carried out, e.g. bed washing). NCCs also describe the intensity of the care package and whether it is short, medium or long term. A pre-audit was carried out in Spring 1999 to see if there was consistency in the interpretation of the NCCs. Responses to a questionnaire sent to all nurses using the system suggested the code categories were poorly defined and creating confusion. A sub group was therefore formed to develop Nursing Criteria for each NCC. These criteria are currently being piloted. Another audit will be conducted after the pilot to see if interpretation of NCCs is any more consistent.

3.7.12

Does record keeping in the Community directorate meet UKCC guidelines? ■ ▶

Jess Dougal, Associate General Manager

Previously in the Community, the various professions have audited their case notes at irregular intervals, but one of the main aims of this current audit is to take undertake audit as a multidisciplinary exercise (Health Visitors, District Nurses, School Nurses). The audit will take place in two stages: firstly looking at fundamentals such as labels attached, carer's recorded, black ink etc., and secondly at the content and quality of the record keeping. A proposed audit tool was piloted in January 2000 prior to the full audit takes in May. Records

from each Nurses / Health Visitor's caseload will be randomly selected from ICS (Integrated Community System), and staff will audit each other's notes.

3.7.13

By improving communication, is uptake of screening for anaemia / haemoglobinopathies, and improved follow-up possible? «

Rebecca Mullen, Health Visitor, Keynsham Clinic

The aim of this audit was to increase levels of screening for iron deficiency anaemia in children aged 13 months, and to ensure they receive appropriate advice and treatment. Fewer parents were bringing their children to the Charlotte Keel Health Centre for MMR (Measles, Mumps & Rubella) vaccine due to fears about side-effects of the vaccine, hence fewer children were receiving an anaemia blood test (usually carried out at the same time as the MMR). ALSPAC (also known as the *Children of the Nineties Study*, by Institute of Child Health) data indicated that 23% of 8 month olds are anaemic – a problem which could result in altered central nervous system development. Health Visitors, GP's and Treatment Room Nurses participated in the audit which incorporated all children aged 13 months, registered at 3 inner city practices, over a 3-month period – a sample size of 66 children. Data was collected from Health Visitor records, clinic cards, treatment room records, computer lab results & medical records. Results indicated that 46% of children had been screened for anaemia and that 18% of those children were identified as anaemic. Overall the audit has raised awareness of the importance of anaemia tests. Treatment Room nurses now give out appointments for anaemia tests for those not able to have the test done at the time of the MMR. Other action points have included an information leaflet for parents and improved systems for identifying abnormal results.

3.7.14

Is universal screening of vision in 3rd & 4th year schoolchildren more efficacious than targeting? «

Pat Richards & Val Moore, School Nurses, Granby House Clinic

Within locality 3 area of UBHT all year 3 & 4 schoolchildren have their vision routinely tested by the school nurses. A suggestion was made that children would not be routinely screened but rather would be referred for a vision test if requested by a worried party (e.g. parent, teacher). Results of eye tests conducted between November 1998 and April 1999 were therefore evaluated: 14.4% were referred on to an Optician, 4.5% prescribed glasses, and 2% were referred on for further investigation.

This highlighted the need to continue to screen all children.

3.7.15

Do prescriptions for equipment adhere to new European legislation? « »

Jess Dougal, AGM

Progress with this audit has been temporarily delayed to ensure full multi-professional participation. The purpose of the audit is to:

- Identify if professionals are issuing the correct equipment
- Check that staff understand the legislation and use the guidelines
- Establish whether related training was effective

3.7.16

How can we improve the self-management of asthma patients who attend treatment room for nebulising? ■ »

Pauline Lawson, Treatment Room Nurse, Montpelier Health Centre

An asthma self-management plan has been devised and issued to asthma patients seen at the Montpelier practice. An audit of the effect of this change has shown a reduction of appointments in the follow-up clinic. The self-management plan was therefore extended to patients attending the treatment room for nebulising, however staff changes have meant that the impact of this second change has not yet been audited.

3.7.17

Do patients receive consistent information about immunisation for foreign travel? ■

Cathy Hourne, Treatment Room Staff Nurse

A survey of treatment room nursing staff showed that nurses were giving varied levels of information to clients who intended travelling abroad. Authorisation was therefore obtained

from GPs to standardise the information and prepare a new information form for use when giving out advice. A re-audit is planned for 2001.

3.7.18

Improving patient documentation in Physiotherapy ■

Pat Lansdale, Head of Physiotherapy, Keynsham Hospital

As part of the Physiotherapy Department's rolling programme of annual audits, quality of documentation is regularly targeted. The annual audit checked basics such as record labels, next of kin listed etc.(to comply with legal requirements) as well as clinical content. The results of the audit proved that the department was meeting established local standards.

3.7.19

Has the introduction of a Physiotherapy Triage Post reduced direct referrals to Physiotherapy Departments at Keynsham and BGH? ■ ▶

Cathy Bradshaw, South Bristol PCG

The aim of this current audit is to assess the effect of the physiotherapy triage post on all 'cold' orthopaedic referral numbers with a view to reducing the number of patients referred direct to the physiotherapy departments at Keynsham Hospital and the Bristol General Hospital. Part time physiotherapists have been put into practices for weekly sessions in order to triage patients before they see the Consultants. They can be referred directly to physiotherapy, orthopaedics, discharged with advice, or sent to see the Consultant. Data is being gathered from GP notes from March 1999 for a period of 12 months.

3.7.20

Can the amount of assessment and treatment time given to physiotherapy outpatients be increased without detrimental effect on the service? «

Jane Golden, Physiotherapist, Outpatient Department, Central Health Clinic

The current physiotherapy musculoskeletal outpatient assessment and appointment duration, are based on local standards, a literature search having revealed no current evidence about best practice. The aim of the audit was to show that an increase in these times to 1 hour and ½ hour respectively, did not adversely effect the service rate. Physiotherapists based at the Grange collected data over two 3 month periods (November 1997-January 1998, and November 1998-January 1999). Problems were encountered with calculating staffing levels and numbers of hours worked, therefore it was impossible to draw firm conclusions from the audit. However, it has identified a need for further audits in this area.

3.7.21 & 3.7.22

Are Home Assessment Standards being met? ■ ●

Amanda Schopp, Senior Occupational Therapist, Keynsham Hospital

This audit was undertaken to ensure that the standard practices last examined in 1997 were still being followed by all team members, i.e. that patients undergoing a home visit / assessment are fully informed, safe, and benefit from intervention pre/post assessment as part of the plan for discharge process. OT patient notes and Ward notes were randomly selected over a 3 month period, representing the work of all team members doing home visits with patients. A target of 100% adherence was achieved in 6 out of the 9 practices observed, and the resulting action plan covered team feedback and further training on the 3 areas that did not reach the target. A re-audit was later undertaken to establish that the training, group discussion and action plans implemented after the first audit were working and being utilised by all team members to the benefit of patients using the service. This suggested that modifications were needed to the initial assessment form. A further audit is planned for later in 2000.

3.7.23

Do parents find their contact with the Sleep Clinic beneficial? ■

Julie Warner & Linda Rowbottom, Health Visitors, Charlotte Keel Health Centre

The aims of the Sleep Clinic are to give parents focused time to discuss difficulties around their children's sleep, to provide information around children's sleep, to help parents decide a plan of action on managing sleep problems, and to offer parents the opportunity of follow up. This audit was undertaken to measure against the Sleep Clinic's standards (relating to the overall aim) and to see if patients found the Clinic to be useful. All patients who attended the

Sleep Clinic at Charlotte Keel H/C during 1998 were sent a patient questionnaire. All responded that they felt the Clinic and staff helpful. The audit also showed that the Nurses were meeting their standards. As a consequence of the audit, the Sleep Clinic Nurses are looking at ways to advertise their service better, and the possibility of producing an information booklet.

3.7.24

Are new staff satisfied with their orientation to the directorate? ■

Helen Lockett, Assistant Manager, CHC

This issue had been raised by staff in the Community Directorate. 25 members of staff from various posts and bases were selected from a group of new employees who had been employed more than 3 months but less than 12 months. 17 staff were subsequently interviewed about issues around the orientation they had received, and were asked to complete a short questionnaire (8 staff were unavailable or declined to be interviewed). The experiences of staff ranged from the excellent, where individuals felt welcomed, to the poor, where individuals felt unwelcome and had considered resigning. Specific areas of concern included:

- First few days of arrival
- Information giving
- Mentorship
- Community induction programme and workbook

Subsequent to this survey, a standard has been developed with a stated aim "to ensure all new members of staff have a comprehensive and effective orientation" and specific objectives covering greeting, mentorship, attendance at Trust and Community induction and service orientation. Each new member of staff, in addition to completing their workbook within 3 months, will be given an orientation check list to complete. An audit of the new standard is due to take place in September 2000.

3.7.25

Do Health Visitors have the skills and knowledge to enable them to confidently and competently question clients and deal with issues arising from domestic violence? ■

Research suggests that regardless of age, class or ethnicity, 1 in 4 women will experience domestic violence at some time during their life and that 1 in 3 incidents of domestic violence contain evidence of child abuse. The financial implications for the health service are enormous. Although health visitors are identified as a primary source of help, the evidence is that health visitors do not feel adequately trained to deal with the subject. The aim of this audit is to identify whether health visitors within UBHT have the necessary knowledge and skills to enable them to identify and manage, with competence and confidence, issues arising from domestic violence. Results indicated that Health visitors within UBHT have a variably comprehensive understanding of domestic violence. Almost all could identify or suspect situations of domestic violence within their caseload, however half of practitioners identified that questioning clients about domestic violence was difficult. Some areas of deficiency in record keeping were identified but overall practitioners viewed support by their peer group and of clinical co-ordinators in a positive light. As a consequence of this audit, a number of standards have been proposed:

- Health visitors will attend multi-agency domestic violence training within 12 months of joining the Trust with a 3 yearly up-date / refresher thereafter
- Health visitors will include domestic violence in routine health assessments with families
- Health visitors will produce local information on resources, which they will update at 6 monthly intervals

PROBLEMS ENCOUNTERED & LESSONS LEARNED

- "Some audit leads found difficulty in achieving change amongst their peers.
- Although the culture is changing, a percentage of staff still think audit should be done only if they can spare time.
- For the local Audit Team to manage audit well, a more structured approach had to be developed"

ALSO SEE...

Medicine – “How effective is the Home Enteral Feeding Programme?” (3.11.9)

CRITICAL CARE (incorporating ANAESTHESIA)
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SUMMARY

Number of 1998/9 roll-overs ◀	13*
Number of new audits ■	11
Number of re-audits ●	1
Number of ongoing monitoring projects ▶	4
Total number of audits	26
Number of current (i.e. uncompleted) audits ▶	9

* 2 projects have been rolled over from last year's Surgery report. 2 projects appear in Appendix C.

	1998/9	1999/2000
Multidisciplinary audits	7/15 (47%)	5/16 (31%)
Interface audits	1/15 (7%)	0/16 (0%)
Audits measuring against or resulting in development of standards or guidelines	11/15 (73%)	11/16 (69%)
Audits involving standards or guidelines which have been/will be developed following consideration of available evidence about clinical effectiveness	7/15 (47%)	3/11 (27%)
Audits examining a Cost Effectiveness issue	-	1/16 (6%)
Audits examining a Risk Management issue	-	7/16 (44%)
Audits which directly involved patients <i>(percentages above do not include 1998/9 roll-overs)</i>	4/15 (27%)	0/16 (0%)
Audits resulting in changes in practice <i>(percentages above include 1998/9 roll-overs, but not 1999/2000 'current' projects)</i>	5/9 (56%)	12/17 (71%)
Resulting in measurable benefits for patients <i>(percentages above include completed re-audits and ongoing projects only)</i>	1/4 (25%)	3/7 (43%)

EXEMPLAR AUDITS

3.8.1**Are Anaesthetic records being completed fully? ◀**

David Roberts, Medical Student

Anaesthesia

This audit was undertaken as part of the CNST audit but was also locally relevant to the process of updating the anaesthetic record card. Standards were taken from the new GMC guidelines. Whilst the guidelines required some pieces of information not routinely collected on the UBHT anaesthetic record, overall results were nevertheless very good. Examples include: Anaesthetist's Name 98% (55% in previous audit), Date 98% (90%) and Medication 94% (80%). However, recording of allergies fell from 95% at the last audit to 88% in this audit. The new anaesthetic record is now being designed with these results in mind.

3.8.2**Can paediatric analgesia be improved in A&E? ■**

Dr Pritchard-Jones

Anaesthesia/A&E

It is understood that children are generally under-treated for pain, and that inadequate pain relief can be detrimental to a critically ill child. The standards for this audit were those published by the British Association of Accident and Emergency Medicine (1997), including:

- recognition of pain
- 100% of children should have pain assessed by doctors or nurses
- the patient should be reassured
- 100% of children in pain should be offered analgesia
- patients should be offered physical measures (i.e. splints) where appropriate.

Data was collected during three periods - February/March, May/June and July 1999. Data from the first period was presented to department staff to raise awareness of the issue.

Results for the second period showed improvements in triage assessment, doctor assessment and prescribing of analgesia, however it was disappointing to note that by the end of July, practice had returned to former levels. A user-friendly combination of prescribing information and a pain assessment tool compatible with those used at BCH is required to improve the quality of practice.

OTHER PROJECTS

Anaesthesia

3.8.3

What problems are being experienced with regional anaesthesia for caesarian section?

« »

Dr Mike Kinsella, Consultant Anaesthetist

The aim of this audit is to define the prevalence of problems with regional anaesthesia for caesarean section in terms of change of anaesthetic techniques from that intended, analgesic supplementation and conversion to general anaesthesia. The objectives are to clarify the surgical and anaesthetic factors involved and to improve the application of different techniques. Results are being analysed currently.

3.8.4

Are children experiencing acute pain following major surgery? »

Dr P Stoddart, Paediatric Anaesthesia Consultant

The purpose of this continuous monitor is to ensure that no patients experience acute pain following major surgery and that unpleasant side effects of pain control are minimised. This year 1.5% of 1023 patients surveyed were dissatisfied with their analgesia. This compares with 3.0% in 1998. 11 Critical incidents have been identified from these patients and these cases have been discussed within the team and appropriate changes implemented.

3.8.5

Are admissions to the Day Unit (Ward 1, BRI) appropriate? «

Dr D Terry

The aim of this audit was to minimise the number of patients presenting to the Day Unit who subsequently have to be admitted. The specific focus of this project was Special Needs dental patients. By providing these patients with appropriate pre-assessment in community and using the services of dedicated anaesthetists for lists, it should be possible to avoid the need for Special Needs cases to be admitted as inpatients. The objectives of the audit were a) to ensure that a full medical history was obtained, b) to ensure good quality dental referral, c) to ensure that consent was obtained and d) to promote good will and communication within the team. Changes in practice stemming from this audit include improved referral procedures, pre-op assessment, appointment of a dedicated Consultant Anaesthetist, standardised monitoring in theatres and the anaesthetic room, team training and improved anaesthetic techniques. The main benefit of this audit was that no Special Needs dental cases from Day Unit lists have subsequently required treatment as inpatients.

3.8.6

Is there cause for alarm? ■

Dr Andy Cohen, SHO

Alarms on anaesthetic machines are triggered in theatre if, for example, a patient's respiratory rate or blood pressure drops too low. The aim of this audit was to assess the level of awareness amongst anaesthetists of alarm limits on their anaesthetic monitoring equipment. Data was collected on minimum and maximum monitoring, permanent alarm disablement, and default and customised settings. Results showed that only 1 of 51 anaesthetists knew all the alarm limits, whilst 2 anaesthetists had alarms disabled, and 29 were using default 'factory' settings. Subsequent changes have included the implementation of standardised default alarm settings on all anaesthetic monitoring across the trust, improved visual display of alarm limits, and provision on the anaesthetic chart to note alarm limits.

3.8.7

Can attendance at resuscitation training days be maximised? ■

Resuscitation Team

Training days run by the Resuscitation Team for UBHT staff are often poorly attended. The standard for this audit was that no person should cancel training less than one week before the course date (with the exception of sickness). Over a two month period 67 people did not attend their training session, the primary reasons for non-attendance being staff shortage (10%) and late notification (9%). Issues concerning non-attendance will be raised with the Clinical Risk Management Group. Letters to attendees will be issued earlier.

3.8.8

Do all telephones have the correct emergency number on them? ■ ▶

Carolyn Meyer, Resuscitation Officer

This audit arose after an audit was undertaken at BCH which showed that most telephones did not display a number to ring in the event of a cardiac arrest. A subsequent survey of the BRI Old Building showed that 75% of telephones did not display a cardiac arrest telephone emergency number. As part of the audit, stickers were immediately placed on telephones with the correct emergency details. This audit is now being rolled out to the Queens Building with the King Edward Building to follow shortly.

3.8.9

Epidurals in Thoracic Surgery ■ ▶

Dr Tom Simpson, SpR

The aim of this project is to standardise information given to patients about risks associated with epidurals in thoracic surgery. The audit is looking at what different anaesthetists tell patients regarding risks, and what patients can recall after surgery. Data is currently being collected.

3.8.10

NATIONAL AUDIT

What can we learn from Critical Incident Reporting? ▶▶

Dr Simon Howell, Consultant Anaesthetist

Critical Incident Reporting allows staff to report incidents without fear of being placed in a more uncomfortable position than not having done so. A critical incident may be defined as an event which led to harm, or could have led to harm if it had been allowed to progress. It should be preventable by a change of practice. Critical Incidents are reported to the department at monthly meetings, where they are discussed. Incidents are also reported to the Royal College of Anaesthetists.

3.8.11

Can we ensure that patients' temperature does not drop on the way to theatre? ■ ▶

Dr Simon Massey, Consultant Anaesthetist

The aim of this audit is to measure the patient's temperature at various points on the way to theatre to establish where temperature drops happen, and so look at how to avoid such drops in temperature. This audit is still in the preliminary stages, with data collection due to start shortly.

3.8.12

Postoperative pain relief and side effects ■ ▶

Jacqui Gannon, Clinical Manager, Pain Clinic

The aim of this audit is to develop trust-wide guidelines for appropriate and patient-acceptable analgesia following different types of surgery. Following a delay in the audit due to the theft of the Psion database, 6 months data has now been successfully collected. A minimum dataset of nineteen terms was used, as agreed by the South West region Acute Pain Special Interest Group. Bench-marking from this dataset is currently taking place.

3.8.13

Can Trust-wide guidelines be agreed for post-surgical pain relief? «

Jacqui Gannon, Clinical Manager, Pain Clinic

The aim of this audit was to establish by means of a questionnaire whether patients are satisfied with their post-operative pain relief on the surgical and trauma wards. The objectives were to ensure that all patients receive effective post-operative pain management, ensure that all patients receive an explanation of their pain management pre-surgery, and ensure patient satisfaction with their pain management. 120 surgical and trauma patients were audited over a period of 2 months. Only 56% of patients received an explanation of their pain management before surgery; 33% before and after surgery, 7% only after surgery. 92% were satisfied with their pain management, and 5% dissatisfied. A new patient information leaflet regarding anaesthesia and pain relief has been designed for issue to patients prior to their coming to hospital.

3.8.14

REGIONAL AUDIT

Are departmental protocols for hypertensive patients undergoing anaesthesia and elective surgery being followed? ■

Professor Prys-Roberts, Senior Consultant Lecturer

Anaesthetists in the South West region were questioned about their department protocols regarding the anaesthetising of hypertensive patients. The survey showed a great variability in practice, particularly for patients with moderate hypertension. This is a topic which needs protocols, but there are too many differing strong opinions, and no firm evidence-based studies. Departmental protocols in Trusts across the country are not strictly adhered to.

3.8.15

Are cardiac trolleys carrying sufficient equipment to ensure maximum patient safety? «

Keith Lewis, Resuscitation Officer

This audit showed that the contents of cardiac trolleys did not always conform with UBHT Cardiac Trolley Guidelines. 35 trolleys were audited, each of which should have contained 55 specific items. However, 10 per cent of trolleys had more than 33% of items missing. One trolley had 80% of items missing. All trolleys were subsequently brought up to specification and the Clinical Risk Management Committee is currently considering the option of a central ordering point to enable bulk ordering.

3.8.16

Can recovery times at St Michael's be reduced? « »

Dr S Harris, SHO

The aim of this audit was to look at recovery times for laparoscopic sterilisation and tonsillectomies and the different types of analgesia used. The objective was to try and establish a protocol for using analgesia in these procedures. Data will be analysed and presented shortly.

3.8.17

REGIONAL AUDIT

Can we predict likelihood of death for patients over the age of 65 who have perforated large bowel at laparotomy? ■ »

Dr M Schuster-Bruce

Possum scores (Physiological and Operative Severity Score) are calculated using data found routinely in pre-operative assessments and anaesthetic records. Data is currently being analysed in London.

3.8.18

NATIONAL AUDIT

VASGBI Aortic Surgery Audit ■ »

Dr Howell

UBHT is participating in a national audit (Vascular Anaesthesia Society in Great Britain & Ireland) of Vascular Surgery and Anaesthesia which is seeking to establish links between outcome and other factors including pre-operative risk factors, preoperative investigation

results, anaesthetic technique and surgical factors. Local results will be compared with national results when they are published.

3.8.19

How many complications arise from the use of Regional Eye Blocks in Bristol Eye Hospital? ■

Dr F Forrest

This audit was undertaken to look at any problems experienced by patients having regional eye blocks. A three month data collection exercise was undertaken. 72 regional eye blocks were identified and complications arose in 5 (7%). This rate was in line with general expectations, although no local or national data currently exists for comparative purposes. The results were discussed at a departmental meeting.

3.8.20

How successful is the newly standardised infusion mixture in post-operative epidural analgesia for gynaecology patients? « ›

Dr R Craven

A new standardised postoperative infusion mix was introduced at St. Michael's Hospital. The effects of this new mix will be compared to the standards set by Hobbs *et al* in *Anaesthesia* (1992), i.e. 97% 'good analgesia'. Data is currently being analysed.

3.8.21

Intensive Care National Audit & Research Centre (ICNARC) Database »

Dr S Willatts

Ongoing ICNARC data collection monitors clinical outcomes of patients requiring Intensive Therapy and provides comparisons with national data. Unexpected outcomes are identified for close scrutiny. The Unit is currently waiting for the latest national update following IT-related problems.

3.8.22

Are levels of monitoring and anaesthetic apparatus checks in accordance with standards laid down by the Association of Anaesthetists of Great Britain & Ireland? «

Dr Jonathan Howes

This audit was undertaken following the publication of 'Recommendations for Standards of Monitoring during Anaesthetic Recovery' produced by the Association of Anaesthetists of Great Britain and Ireland (AAGBI). The administration of this audit has now moved to Southmead.

3.8.23

Are patients available for pre-operative assessment? «

Dr S Howell, Consultant Anaesthetist

This audit was based on a general perception that lists start late and run inefficiently because patients are not available for pre-operative assessment. An audit in 1998/9 confirmed that 35% of lists started late because patients and/or vital information were unavailable. A pre-operative assessment clinic has since been established to overcome these problems.

A&E

3.8.24

Are expected medical and surgical patients in A&E experiencing delays in seeing an appropriate grade of doctor? («)●

Paul Younge, Registrar

This re-audit was carried out in order to ensure that patients are being seen by an appropriate grade of doctor and within an appropriate length of time for their triage category. Results showed a significant improvement on the first audit in triage categories 3 and 4 ('urgent' and 'standard'), with respective increases of 29% and 33% in the proportion of patients seen by the minimum required grade of doctor.

(Note: this project was reported under the directorate of Surgery last year).

3.8.25

Are patients spending longer than necessary in a cervical spine immobiliser? «

Katie Barton, Staff Nurse

Following this audit in 1998/9 a protocol has been introduced to ensure that patients are taken out of a cervical spine immobiliser within 45 minutes of arrival at A&E (standard 100%), thereby reducing patient discomfort, pain and stress. (Note: this project was reported under the directorate of Surgery last year).

3.8.26

REGIONAL AUDIT

Major Trauma Outcome Study »

Lynne Dadley, MTOS Co-ordinator

The last year has been another interesting year with further IT developments within the department to add data collection. The breakdown of the data analysis for the BRI on the study to date is as follows:

- Number of cases entered onto the study so far = 270
- Blue forms (Secondary referrals into the BRI = 18 (6.66%)
- Number of patients who have died = 31 (11.48%)
- Number of patients who are > 54 years of age = 9 (3.33%)
- Number of NFS's = 34 out of 1109 - Injuries scored = 3.06%
- (Not sufficient detail to accurately score)

Not calculated (N/C) = 41 (9 Blue) 32 (11.85%)

(One of the following base line observations not recorded – Glasgow Coma Score, Blood pressure, Respiratory rate)

Breakdown of N/C's

Yellow Form (Primary hospital admission)

Ventilated	= 2 paediatric, 13 adults
No Resp Rate	= 1 paediatric, 10 adults
No B/P	= 3 paediatric, 1 adult
No CVS observations	= 1 paediatric, 1 adult

Blue Form (Secondary hospital admission)

Ventilated	= 2 paediatric, 2 adult
No Resp Rate	= 3 adults
No GCS	= 1 paediatric, 1 adult

The Peer review process continues as of the group of participating hospitals the BRI was identified as having the highest proportion of unsatisfactory cases. All the issues highlighted have subsequently been addressed, e.g:

- Patients with depressed levels of consciousness (GCS 14 or below) should be CT scanned within the first 12 hours of admission (preferably within the first 2 hours), if the mechanism of injury indicates the possibility of a head injury. Failure to do so can lead to delayed diagnosis and definitive treatment.
- All patients whose injuries result from a fall of greater than 2 metres should have the ATLS recommended triple x-ray screen of C spine, chest, pelvis, and thorocolumbar spine, thus preventing delays in diagnosis of spinal and pelvis fractures.

ALSO SEE...

Cardiothoracic Services – “Are mortality rates per Anaesthetist team within accepted rates?” (3.5.7)

For Paediatric Anaesthesia, also see **Children's Services**

DENTAL SERVICES

SUMMARY

Number of 1998/9 roll-overs ◀	5		
Number of new audits ■	7		
Number of re-audits ●	4		
Number of ongoing monitoring projects ▶	2		
Total number of audits	18		
Number of current (i.e. uncompleted) audits ▶	5		
	1998/9	1999/2000	
Multidisciplinary audits	2/15 (13%)	5/13 (38%)	
Interface audits	2/15 (13%)	4/13 (31%)	
Audits measuring against or resulting in development of standards or guidelines	14/15 (93%)	12/13 (92%)	
Audits involving standards or guidelines which have been/will be developed following consideration of available evidence about clinical effectiveness	8/15 (53%)	5/12 (42%)	
Audits examining a Cost Effectiveness issue	-	5/13 (38%)	
Audits examining a Risk Management issue	-	3/13 (23%)	
Audits which directly involved patients	6/15 (40%)	1/13 (8%)	
<small>(percentages above do <u>not</u> include 1998/9 roll-overs)</small>			
Audits resulting in changes in practice	7/11 (64%)	9/13 (69%)	
<small>(percentages above include 1998/9 roll-overs, but not 1999/2000 'current' projects)</small>			
Resulting in measurable benefits for patients	4/4 (100%)	4/5 (80%)	
<small>(percentages above include completed re-audits and ongoing projects only)</small>			

EXEMPLAR AUDIT

3.9.1

Are local guidelines on cross infection control on domiciliary visits being followed? ●

Michelle Dicks, Dental Nurse

Community Dental Health

Cross infection control guidelines for domiciliary visits were issued by the Bristol Dental Hospital in September 1998. An audit was carried out by the Community Dental Service on domiciliary visits in January 1999 to see if the guidelines were being carried out. Results showed that not everybody was using the proprietary handwashing solution or transporting used sharps and contaminated instruments securely. Recommendations were implemented and a re-audit took place in November 1999. Results of the re-audit showed a substantial improvement in the handwashing and secure transportation of sharps. However results were worse for use of heavy duty gloves to unpack instruments and a reminder was sent out.

3.9.2

Are patients and parents satisfied with the paediatric dental service? ◀

Peter Crawford

Child Dental Health

This project was carried out by the staff of the Consumer Involvement and Information Unit. 258 questionnaires were returned, representing a response rate of 57%. Parents' views were sought on issues such as how their children were treated on arrival and during the consultation and whether any improvements could be made to the service. As a consequence of this audit, a new leaflet is being devised to give parents/carers more information about the visit. One criticism was poor access to the hospital for wheelchairs and pushchairs; this is being investigated. An improvement has already been made in the lack of facilities in the waiting area.

OTHER PROJECTS

Child Dental Health

3.9.3

How good is the dental health of children attending cardiology outpatient clinics? «

Mr P Crawford, Consultant

Children with congenital heart disease are at increased risk of developing infective endocarditis. This potentially life-threatening disease can result from failure to maintain good oral and dental health. Following an audit in 1998/9, the Clinical Audit Committee agreed funding to enable the development of promotional information (in conjunction with the Cardiology department) for children/carers. This is now given to all at risk children by their cardiologist when they attend for an outpatient appointment. A re-audit is planned for November 2000 to measure the impact of the leaflet.

Community Dental Service

3.9.4

Are patients able to have their recall appointments when clinically indicated? »

Anne White

The pressure of seeing new patients means that patients do not always get a recall appointment when it is clinically indicated (e.g. at six months). By monitoring appointments and reallocating duties it has once again been possible to ameliorate the problem in several clinics.

Oral medicine

3.9.5

Are dental radiographs being reported in patients' notes? ■

Jane Luker, SDO

New ionising radiation regulations (IRR99) are due to be introduced in the near future and will legislate that all radiographs taken should be reported upon. This audit was undertaken within the dental school to see if radiographs currently being taken had documented reports in the patients' notes (Target 100%). Data was collected from 100 sets of notes returned to the dental records department. The total number of exposures that could expect reports was 213. The audit showed that 34% of radiographs taken were not reported. Guidelines have been issued to all clinical staff stating that all radiographs must have a written report. A re-audit is planned for the future.

3.9.6

Are the agreed guidelines about oral health assessment prior to radiotherapy for head and neck malignancy being followed? «

Mr A Brooke, Senior Dental Officer

Serious complications may arise from dental disease and treatment in previously irradiated oral tissues. The objectives of the audit were to determine if and when dental assessments and treatment were carried out and to evaluate patients' opinions of information given. The standards were that all patients should receive dental assessments and essential treatment prior to radiotherapy and all patients should be fully informed of the effects of radiotherapy. Results reported for 1998/9 were interim only. Final results once data collection complete were as follows: 43% of patients had dental assessments prior to radiotherapy; 39% during or after radiotherapy; 18% not at all. 84% received information on the side-effects but this information was of varying quality. It is now recommended that the oncology support nurse should be responsible for ensuring that patients receive dental assessments. It is hoped to produce an information leaflet for patients.

Oral & Maxillofacial Surgery

3.9.7

REGIONAL AUDIT

How does the treatment of maxillofacial trauma in Avon compare with the NCEPOD (National Confidential Enquiry into Perioperative Deaths) guidelines? «

Mr C Bell, Senior Dental Officer

Recommendations following this audit (originally reported in 1998/9) are currently being negotiated as part of the centralisation process.

3.9.8

REGIONAL AUDIT

Auditing the process or care and outcomes in patients with Head & Neck Cancer ■ ▶

Chris Bell, SDO

The aim of this project is to audit the process of care of people with head and neck cancer from general practice referrals to specialist outpatient clinic, investigation, treatment and outcome using path analysis of the British Association of Head & Neck Oncologists National Audit data set. This will facilitate the comparison of local performance with other units and against established national standards.

3.9.9

What causes disruption of admissions/operations in Oral & Maxillofacial Surgery? ■

Chris Bell, SDO

The purpose of this audit was to minimise patient procedure cancellations where patients have already been given a date and treatment is expected. 57/215 (27%) operations were cancelled in the period August 1999 – February 2000. The vast majority of cancellations were accounted for by a) cases being displaced by more urgent ones, b) lack of beds and c) surgeon absent through illness. The following recommendations have been made:

- Investigation into funding for trauma lists
- Provision of increased access for routine patients to be admitted to surgical beds
- Investigation into discrepancies in data recording and use within the Trust

3.9.10

Are patients receiving sufficient information why their wisdom teeth are to be removed and about the complications which may arise? ●

Professor J Cowpe

Following an initial audit in 1998, a new patient information leaflet was devised. A re-audit has recently been undertaken to assess whether patients were receiving the leaflet and whether they had a clear understanding about the reasons for the removal of their wisdom teeth and complications that may arise. Results revealed that only 44% patients received the leaflet. However, far more patients who were given a leaflet indicated that they thought they had received sufficient information than those who were not given a leaflet. A memo will be sent out stressing the importance of giving out the information leaflets.

Orthodontics

3.9.11

REGIONAL AUDIT

Have we met local target for osteotomy outcomes as measured by overjet? ▶▶

Nigel Harradine

This is a regional audit and the first project to utilise the osteotomy database established in 1996. A measure of outcome has been chosen one year post operatively with a standard that 80% of patients had an overjet value between 2mm and 4mm. In the event, 82% of patients were found to have had an overjet in this range. The results also supported the view that cleft palate patients have poorer outcome and should therefore be considered as a separate group to avoid skewing results. It is intended that the audit project should keep running.

3.9.12

NATIONAL AUDIT

Do improvements in dental irregularity meet national standards following orthodontic treatment? ■ ▶

Nigel Harradine

This is a national audit financed by a consultant orthodontist group involving all consultant orthodontists in the UK. A total of 980 national consecutive cases form the audit sample. Measurements have been carried out at the BDH but analysis is undertaken elsewhere. The data is a numerical score of tooth irregularity known as the PAR index. We record this for every case treated in the Hospital which puts UBHT well ahead of average in auditing our results in this respect. Whilst the sample from each Consultant is small and not suitable for statistical analysis of an individual's performance, the total sample is nonetheless a powerful indicator of national practice and should lead to the setting of more robust standards for this type of patient in the hospital orthodontic service.

3.9.13

REGIONAL AUDIT

Do orthodontic clinical records comply with the British Orthodontic Society's minimum data set? ■ ▶

Jo Clark, Senior Registrar

The Developments and Standards Committee of the British Orthodontic Society developed guidelines on the collection and management of orthodontic records which were published in 1999 and included a comprehensive minimum data set for the content of orthodontic records. The objective of this current audit is to establish whether the orthodontic clinical records taken in the South West Region (Northern Group) contain patient details which match the minimum data set produced by the British Orthodontic Society. A questionnaire has been devised to collect and record the appropriate data from patients' notes. Currently each regional consultant and orthodontic SDO in the Community Service is collecting data from 15 consecutive patients on a treatment session. Results are due to be presented in July 2000.

3.9.14

REGIONAL AUDIT

Have changes in practice reduced emergency attendances for archwire problems? ● ▶

Nigel Harradine

An orthodontic patient satisfaction survey highlighted a high number of emergency attendances, 13.5% of which were due to archwire failures. On further analysis it was found that small diameter flexible wire was most prone to problems. Guidelines were devised and a re-audit has commenced to see if the number of emergencies had reduced.

Restorative Dentistry

3.9.15

What proportion of patients in General Dental Practice have evidence of toothwear requiring clinical treatment? ■ ▶

M Woodhead (Consultant) & Dr Carmichael (GDP)

A simple tick box questionnaire sheet concerning toothwear has been filled in by a local general dental practitioner for all new patients seen within a two month period. Data collection has been completed. If the audit indicates a large referral rate then guidelines may be issued to minimise the problem and encourage early interception.

3.9.16

Are radiographic record cards being completed? ●

A Norris, SHO

Radiographic record cards were introduced into patients' notes to monitor the cumulative radiation dose for each patient. An audit in April 1998 showed that cards were not being completed, in particular by Middle Year students. Reminders were sent out but a re-audit in January 1999 showed no improvement. A further re-audit in October 1999 also showed no improvement and, on more detailed examination some sets of notes had no record card. Supplies of the cards have subsequently been made available at each chairside. Signatures of supervising staff are now obtained on the record card *before* the radiograph is taken.

3.9.17

Is damage to master casts a frequent problem? ■

A Telford

It was observed that damage was occurring to master casts. This has a detrimental effect to the quality and fit of a completed partial denture. It also increases the clinical time taken to fit a partial denture. A pre-audit showed an unacceptably high damage to master casts and so a further audit will take place this year to identify areas where damage occurs. Steps could then be taken to reduce the risk and improve the quality of the service.

3.9.18

How many patients fail to complete active periodontal disease treatment? ◀

R Yates

This pre-audit investigated the percentage of patients completing active treatment following an initial course of periodontal therapy and involved three staff levels: staff, trainee hygienists and dental students. Overall results showed that only 24% of patients completed an initial course of therapy and had stabilised active disease (i.e. a successful outcome). 50% of patients who were seen by BDH staff completed their course with a positive outcome – a figure not replicated in patients seen by dental students (25%) or hygiene students (13%).

PROBLEMS ENCOUNTERED & LESSONS LEARNED

“Some audits still tend to lean more towards surveys with insufficient appreciation of the need to measure care against standards. Formal approval of the completed proposal form is a very useful step in countering this. Engaging the participation of University Consultants is also difficult. Guidance on the acceptable interpretation of "participation" will be useful.”

HOMEOPATHIC MEDICINE

SUMMARY

Number of 1998/9 roll-overs ◀	3	
Number of new audits ■	2	
Number of re-audits ●	1	
Number of ongoing monitoring projects ▶	2	
Total number of audits	8	
Number of current (i.e. uncompleted) audits ▶	4	
	1998/9	1999/2000
Multidisciplinary audits	1/6 (17%)	0/5 (0%)
Interface audits	0/6 (0%)	0/5 (0%)
Audits measuring against or resulting in development of standards or guidelines	3/6 (50%)	3/5 (60%)
Audits involving standards or guidelines which have been/will be developed following consideration of available evidence about clinical effectiveness	1/6 (17%)	1/3 (33%)
Audits examining a Cost Effectiveness issue	-	2/5 (40%)
Audits examining a Risk Management issue	-	1/5 (20%)
Audits which directly involved patients	1/6 (17%)	0/5 (0%)
<small>(percentages above do <u>not</u> include 1997/8 roll-overs)</small>		
Audits resulting in changes in practice	3/3 (100%)	2/4 (50%)
<small>(percentages above include 1998/9 roll-overs, but not 1999/2000 'current' projects)</small>		
Resulting in measurable benefits for patients	0/2 (0%)	0/3 (0%)
<small>(percentages above include completed re-audits and ongoing projects only)</small>		

3.10.1

What is the current pattern of referral origin to the hospital? ■ ▶

Dr David Spence, Clinical Director

BHH is looking to undertake an interface project with GPs in the near future. It is hoped that this current audit will provide information to feed into that project about whether GPs are suggesting homeopathic treatment or patients are requesting it. A patient survey will ask a similar question of patients who have been attending the hospital. Results will be used to inform GPs and Health Authorities of any changing referral demands. The data will be comparable with similar data produced by the Royal London Homeopathic Hospital.

3.10.2

How efficacious are homeopathic interventions at BHH? ▶▶

Dr David Spence, Clinical Director

A comprehensive database was established in 1997 to monitor the outcomes of homeopathic treatment. Results from this database have been presented at a number of conferences and the hospital is considering formal publication. The data is at present being summarised by morbidity to provide information to clinicians on areas where they do well and on conditions which they do not treat as effectively. The analysis leads into discussion about standards of best practice by morbidity, and whether referrals to BHH for certain conditions are appropriate. Outcome information will in future be made available to GP's and PCT's .

3.10.3

What is the DNA (Did Not Attend) rate at the Bristol Homeopathic Hospital (BHH)? ▶▶

Dr David Spence, Clinical Director

In 1998/9 BHH introduced a new system whereby the hospital writes to all new patients two weeks prior to their first appointment, stressing the importance of prompt cancellation in the event of being unable to attend. Audit results for 1999/2000 indicated that the DNA rate for first patient appointment had fallen from 8.3% to 6.5% and that the cancellation rate had risen from 16.5% to 19.4%. For follow-up patients, the DNA rate fell from 10.6% to 9.5% and cancellation rate rose from 20% to 23.8%. In future, if a patient DNAs for two consecutive appointments they will be discharged and will need to be re-referred by their GP if they wish to be seen again. A notice displaying the monthly total of appointments lost is to be displayed

in the patient waiting area along with a reminder to cancel their appointment in time for the slot to be re-booked

3.10.4

How efficacious is the treatment of Asthma at BHH? « »

Dr David Spence, Clinical Director

The aim of this audit is to assess the homeopathic treatment of asthma using a number of different outcome measures and subsequently to agree local management guidelines for the treatment of asthma. Data from three follow-up visits per patient is required for this audit – it is anticipated that data collection will therefore take until the end of 2000.

3.10.5

Improving the quality of letters to GPs following an outpatient appointment «

Dr David Spence, Clinical Director

In 1998/9 minimum 'standards' for the content of letters from BHH to GPs were drafted. Results indicated that 2/8 clinical standards (e.g. name and potency of remedy prescribed should be in all letters) and 4/6 office standards (e.g. all letters should state patient's hospital number) had been met. The following standards have since been formalised (copies sent to all doctors):

- The referred /treated condition should always be written in the notes
- Remedy and dose must be written in all letters
- Follow up time must be given
- All letters must be checked for errors before sending and retyped if necessary
- Re audit should include asking GP's what information they would like to receive in letters

3.10.6

The diagnosis and management of Chronic Fatigue Syndrome « »

Dr Christina Scott Moncrief

Analysis of the homeopathic audit database identified a problem with diagnosis of fatigue-type symptoms and significant variations between clinicians in the outcomes of treatment. Local diagnostic and management criteria have therefore been agreed and are being audited against. A year's worth of data is currently being analysed.

3.10.7

Does the pattern of attendance for Chronic Fatigue Syndrome (CFS) patients vary significantly from the overall attendance pattern for BHH? ■ »

Dr Christina Scott Moncrief

The audit arose when the audit lead expressed concern that CFS patients were cancelling or not attending their appointments more readily than the 'norm' and wondered if something could be done about the situation. This current audit therefore compares the treatment pattern of all new CFS patients first seen November 1997 - October 1998 and followed up until Jan 2000, with a sample of all other new patients for the same period.

3.10.8

Has the quality of record keeping in patients' medical notes improved? ●

Dr David Spence, Clinical Director

A previous audit of record keeping had led to a number of changes and recommendations for improved recording in the notes. This audit assessed whether the quality of the recording of clinical information had improved as a result. The audit results showed an improvement in all areas of record keeping but still highlighted some areas where further improvements could be made. Doctors were given copies of their individual results. As a result of the first audit, patients attending BHH bring a form they have completed detailing routine information needed at the initial consultation. This is stored as part of the medical record and has been a major success story in improving the quality of information available from notes. In 2000/1 patients will be given the opportunity to comment on the form as part of a proposed patient survey.

PROBLEMS ENCOUNTERED & LESSONS LEARNED

“BHH is a generalist department treating a vast range of conditions. The long time between follow up appointments means audits on individual conditions involve a lengthy period of data collection to obtain meaningful results. There are currently no national standards or guidelines on homeopathic practice and little published work on 'homeopathy in practice'. The homeopathic database developed by the hospital is therefore of significant interest in the homeopathic community.”

MEDICINE

SUMMARY

Number of 1998/9 roll-overs ◀	18*
Number of new audits ■	15
Number of re-audits ●	3
Number of ongoing monitoring projects ▶	1
Total number of audits	30
Number of current (i.e. uncompleted) audits ▶	15

* 6 projects appear in Appendix C

	1998/9	1999/2000
Multidisciplinary audits	8/9 (42%)	9/18 (50%)
Interface audits	4/19 (21%)	2/18 (11%)
Audits measuring against or resulting in development of standards or guidelines	14/19 (74%)	15/18 (83%)
Audits involving standards or guidelines which have been/will be developed following consideration of available evidence about clinical effectiveness	13/19 (68%)	10/15 (67%)
Audits examining a Cost Effectiveness issue	-	5/18 (28%)
Audits examining a Risk Management issue	-	12/18 (67%)
Audits which directly involved patients	6/19 (32%)	2/18 (11%)
<i>(percentages above do not include 1998/9 roll-overs)</i>		
Audits resulting in changes in practice	5/7 (71%)	8/15 (53%)
<i>(percentages above include 1998/9 roll-overs, but not 1999/2000 'current' projects)</i>		
Resulting in measurable benefits for patients	1/1 (100%)	0/3 (0%)
<i>(percentages above include completed re-audits and ongoing projects only)</i>		

EXEMPLAR AUDITS**3.11.1****Early identification and measurement of patients with dysphagia ■***Vicki Weekes & Jackie Griffiths***Speech & Language Therapy**

This project was shortlisted for UBHT's 1999/2000 'Audit Oscars'
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The SALT Dept covers three hospital sites. historically there have been differences in Dysphagia Management across these sites. This audit used a combination of patient observation and nursing staff questionnaires to examine the current process of identifying and managing inpatients with swallowing problems.

Feeding recommendations were implemented with only 82% success. Greater difficulty occurred with implementing recommendations relating to supervision and equipment (62% and 50% respectively). In addition there was confusion about the current screening checklist and referral form. A major reason for non-compliance with recommendations was lack of staff awareness.

Documentation has subsequently been updated and standardised. This audit highlighted a need for dysphagia training which is currently being addressed through a new staff training post.

3.11.2**Is the directorate's antibiotic prescribing policy being followed? ◀***Debbie Campbell***Pharmacy**

Ensuring that patients receive the correct supply and dosage of antibiotics avoids unnecessary complications and helps cost-efficiency. Separate studies were conducted at the BRI and BGH with a view to establishing antibiotic prescribing guidelines.

In over 70% of pneumonia cases the directorate policy was adhered to, however length of treatment tended to be longer than necessary. Chest infections other than pneumonia tended not to be treated in accordance with directorate policy. 62% of UTI cases were treated in accordance with the policy.

Following this audit a summary reminder of the antibiotic policy has been produced and attached to staff bleeps. An additional training session on antibiotic prescribing has been added to the medical staff induction program. Use of Clarithromycin is now limited to atypical pneumonias only.

The policy has been of interest to the Dept. of Health Antibiotic Prescribing Taskforce which has been acting on the House of Lords' report on antibiotic resistance. The UBHT policy is to be used as an example of an innovative step to help the increasing problem of antibiotic resistance.

OTHER PROJECTS

Directorate wide

3.11.3

Implementation of Trust wide nutrition standards ■ ▶

Linda Prosser, Manager

Trust-wide standards have been agreed for the following aspects of nutritional care:

1. Nutritional assessment, care plan and monitoring
2. Nursing responsibilities
3. Patient choice and service
4. Defining mealtime process and procedures
5. Food service

This work was prompted by national concerns about patient nutrition and was informed by previous work carried out at the Bristol General Hospital. A rolling programme of training and implementation will commence in late Spring 2000. An audit tool is currently being piloted.

3.11.4

Nursing Dependency Study ■ ▶

Sandra Eason, Ward Manager

The aim of this current nursing audit is to assess staffing needs on the medical and surgical wards. Patient dependency is being measured using the East Glamorgan Scoring System. Interim results show a wide variation between wards in terms of needs and resources.

3.11.5

What is the quality of nursing notes in the directorate? ◀◀

Kate Suter, Ward Manager

This re-audit was undertaken as a follow-up to the 1998/9 CNST casenote audit. The aim was to ensure that nursing notes comply with UKCC standards of record keeping. Whilst there was some improvement from the CNST audit some areas of concern remained. In particular allergies/hyper-sensitivities were not recorded on 28% of drug charts and 70% of care charts. The template of the nursing kardex needs to be amended to include a place to record allergies - in the interim a rubber stamp will be used to add this field to the notes. Further awareness sessions for staff will be held and another re-audit is planned with additional spot-checks of drug charts.

3.11.6

Are nursing care standards being maintained? ▶▶

Jan Lynn, Senior Nurse

26 nursing standards which follow patients' progress from admission through to discharge, are monitored on an ongoing basis to ensure the provision of a high quality service to patients. It is hoped to re-convene the Medical Nursing Standards Group in the near future to facilitate this process.

General Medicine

3.11.7

Purchasing of nursing home beds to ease winter bed pressure ● ▶

Dr Simon Croxson

In winter 1999/2000 the Medical Directorate once again sought to reduce pressure on inpatient bed numbers by transferring appropriate patients to nursing home beds. This process has been monitored data will shortly be analysed.

3.11.8

NATIONAL AUDIT

National Diabetes Audit ■ ▶

Jenny Thead, Directorate Manager

The aim of this multidisciplinary audit was to evaluate services for diabetic patients with a view to establishing a National Service Framework. Data was collected on numbers and types of patients and the services they received from the Trust. A report is currently being prepared by external auditors.

3.11.9

AVON-WIDE AUDIT

How effective is the Home Enteral Feeding Programme? («)● ▶

Pat Howard, Head of Nutrition and Dietetics

A home enteral feeding service was established because of the numbers of patients who no longer need hospital care but do still require enteral feeding. Specific objectives of this multi-agency project are a) to ensure patients are receiving an adequate diet for good health, b) to ensure patients understand the use and care of equipment and are receiving the support they need to manage their diet, and c) to ensure that patient weight is monitored regularly. Data analysis from a first audit is yet to be completed (a key member of the audit team went on maternity leave), however a re-audit is currently being conducted and both sets of data will be analysed for comparative purposes.

3.11.10

Can Occupational Therapy assessments be made without a home visit? «

Rosemary Johnson, Occupational Therapist

The aim of this audit was to ensure that the home assessment service is provided in an effective and efficient manner. Specific objectives were to reduce the number of pre-discharge home assessment visits by using alternative methods and increasing the number of assessment visits conducted without patients. Results from the audit indicated that the most accurate hospital assessment included washing, dressing and a kitchen assessment. A washing and dressing assessment alone was found to be very unreliable. The hope is that numbers of home assessments will subsequently be reduced by improving the quality of assessments made in hospital. Funding has recently been obtained for a research post to explore the issue further.

3.11.11

What are the reasons for emergency admissions to the Directorate of Medicine? «

Dr Gerry Tobin, Consultant

There has been a well-documented rise in emergency medical admissions. In order to assist with planning service delivery and future clinical audits, the directorate was granted a sum of £16,000 to investigate reasons for this phenomenon. Data was collected on approximately one third of patients between 1/7/98 and 30/6/99 (n=2484). A small number of conditions were found to account for the majority of medical admissions: chest pain, chest infection, overdose, COPD, falls, CVA, CCF. UTI, Asthma, AF, PE, DVT, GI bleed. The directorate is conducting a drive to ensure that all doctors involved in the management of medical emergency admissions are competent in the care of these conditions. This will include the development of local care protocols.

3.11.12

Are UBHT Blood Glucose monitoring criteria being adhered to? ■

Anne Berry-Fraser

This audit was undertaken to ascertain knowledge levels amongst nursing staff on Ward 81 (elderly diabetes) and whether current practice is safe and acceptable. Some staff were unaware of their personal responsibilities for maintaining their levels of skill and knowledge. It has subsequently been recommended that staff receive an annual update in both theory and practice. Trained nurses will attend a UKCC study day, whilst one-to-one teaching will be organised for some HCAs and a diabetes journal club is to be organised on the ward.

Care of the Elderly

3.11.13

National Sentinel Audit on Evidence Based Prescribing for Older People ◀

Dr Peter Murphy & Chris Swonnell

National data indicates that elderly people are prescribed three times more medication than younger people. The aim of this audit is to support improvements in prescribing and medication use in people aged 65 and over; specifically to ensure that drug treatment is appropriate and avoid prescribing where evidence of benefit is lacking. Results for UBHT included the following:

- The average number of drugs per patient was 8.8 - slightly higher than the National average
- The completion of allergy data was poor - 64%
- One patient (1%) was prescribed prn paracetamol which could have led to a potential overdose (Nationally 10%)
- 63% of patients on benzodiazepines should not have been prescribed this medication according to agreed criteria (Nationally 51%)

Changes implemented since the audit:

1. Drive to reduce inappropriate use of benzodiazepines. Hypnotic policy being to be drafted and approved by MAG & Division
2. Education to be directed at pre-registration physicians and surgeons
3. Aide-memoire to be entered in medical handbook
4. Input into elderly undergraduate teaching course at Frenchay Hospital

A re-audit will be undertaken in March/April 2000.

3.11.14 & 3.11.15

National Sentinel Stroke Audit ◀ ● ▶

Dr Peter Murphy

The aim of this National Sentinel Audit is to achieve national consensus about what an ideal stroke service should look like. Following the first audit in 1998/9 a multi-professional Stroke Interest Group was established at UBHT. In 1999/2000 a re-audit was undertaken to assess the patient's pathway of care from admission through to follow-up. The audit involves various aspects of service organisation (e.g. staff knowledge, information available to staff and patients) and delivery (e.g. assessment, diagnosis, screening, etc) being scored out of 100 points. UBHT's overall score for service organisation was 62/100. UBHT does not have a specialist stroke team but does have a full range of emergency services and support workers (i.e. continence nurse, social worker). The Trust's score was let down by a poor score for multidisciplinary record keeping. The score of 62 was the same as in the previous year, whereas the national average had risen from 60 to 68 in the same period. UBHT's overall score for the delivery (process) of care was 63/100. This represented an improvement on a previous score of 56 points and compared well with the national average which rose from 55 to 62 points over the same period. A part-time research nurse has subsequently been appointed and is monitoring the care of stroke patients. Further recommendations to follow.

3.11.16

How effective is the Fall Service at the William Lloyd Day Centre? ■ ▶

Paulette Nuttall & Ruth Cowell

The Fall Service is an essentially unique initiative which has drawn interest at a national level. This audit was undertaken to ensure that a comprehensive service is being provided for elderly patients who have fallen, to reduce numbers of such falls and to enable patients who have fallen to subsequently live more safely and have more confidence. Data is currently being collected.

Dermatology

3.11.17

Have AHA recommendations about combing reduced the prevalence of head lice in local primary school children? ◀

Dr Anthony Downs, Registrar

An increased resistance of head lice to insecticides has led Avon Health Authority to recommend regular combing as an effective treatment. This audit involved staff from Dermatology, Public Health Doctors and Public Health Nurses. Prevalence of head lice before and after the introduction of regular combing was measured amongst children at three local primary schools. The prevalence of head lice was found to have increased after combing, however Avon has not subsequently changed policy because there is no alternative solution to the problem.

3.11.18

Is Methotrexate prescribing being monitored? ■ ▶

Dr M Kirkup, SpR

Methotrexate is a toxic drug and patients need to be monitored whilst taking it. This current audit is being undertaken in order to find out what monitoring of methotrexate prescribing is happening and who is doing it.

Gastroenterology

3.11.19

Are appropriate patients being identified for receiving interferon treatment for Hepatitis C infection? ◀ ▶

Dr Ralph Barry, Consultant

Infection with Hepatitis C gives rise to chronic hepatitis in 80% of cases and rarely resolves spontaneously. Progression can be eradicated with interferon although approximately 50% of patients relapse and others show no response. The specific objective of this audit is to ensure that appropriate patients are being identified and unnecessary treatment prevented. Patient data has been collected and the genotype results have been obtained from the Public Health Laboratory. An economic model is being prepared and should be available in April. A report of the results will be available in the summer of 2000.

3.11.20

Are patients on a low sodium diet receiving the correct diet? ■ ▶

Dr Ian Shore, Ward 11

The aim of this multiprofessional audit is to ensure that all patients prescribed a low sodium diet (i.e. 40 mmol per day) receive food appropriate to that requirement. Data is currently being collected through ward-based observation.

Genitourinary Medicine

3.11.21

What factors are contributing to inadequate Cervical Smears? ■

Dr Sue Norman

The purpose of this project was to examine factors that may contribute to inadequate smears. Specific objectives were to a) identify if smears were necessary b) determine the factors affecting quality and c) assess the need for further doctor training. Data was collected on 613 samples gathered between April 1998 and March 1999. Results indicated that 61 smears had been inadequate (and hence the test results unreliable). This represents a 10% failure rate – above the national standard of 7%. 38% of inadequate smears were positive (i.e. patients who needed treatment but could have been missed). The results showed variation in performance between doctors. Extra training in the technique has been introduced and the following recommendations have been made:

1. Clinicians must check that a cervical smear is necessary.
2. Colposcopic investigation should accompany a diagnostic smear.
3. A further investigation of individual performance is required.

3.11.22

Are we meeting National Guidelines for the care of patients following sexual assault? ■ ▶

■ ▶

Dr Tessa Crowley

This audit is being undertaken to ensure that a) patients receive health advice and counselling, b) all appropriate tests for STDs are offered, c) a pregnancy test is completed where appropriate and d) to make patients aware of other advice services available. Data is currently being collected from patients' notes.

3.11.23

Is it more appropriate for a patient to be seen by a doctor or a nurse? ■ ▶

Dr Judy Berry

This audit is being undertaken in order to identify appropriate patients for nurse-led clinics. Data is currently being collected.

Neurology Outpatients

3.11.24

Neurology Outpatient standards being met? ■

The audit was undertaken to find out whether the neurophysiotherapy department was meeting locally agreed service standards. Data was collected for all patients seen over a four month period in 1998. 73% of patients were seen within the 3 week standard for an initial appointment following referral. 86% were seen within 15 minutes of the appointed time. 100% had a discharge summary dictated within 7 days. The implementation of a hospital-wide waiting times standard has since made this locally agreed standard obsolete.

Respiratory Medicine

3.11.25

Audit of Annual Reviews for patients with Cystic Fibrosis (CF) ■

Dr J Catterall

This multi-professional audit was undertaken to determine if local practice reaches national standards for the review of adult patients with CF, namely that all adult patients with CF should have a full annual review. Results indicated that 82% of CF patients under the care of UBHT (n=44) had an annual review in 1998. 73% had bacteriology data available, whilst 75% had results from a glucose tolerance test. The following recommendations were subsequently made, leading to improved monitoring for complications in CF patients:

1. Appropriate funding for the number of CF patients being treated (Jenny Theed discussing with AHA)
2. Funding for part-time clerk for data collection and analysis
3. Funding for half-time CF Nurse Specialist
3. CF Fellow in 2003 when the expected number of patients will be 70
4. Actively booking annual reviews (not waiting until next time patient seen)
5. Sputum test and lung function test at every visit

3.11.26

Can response times be improved for physiotherapists attending new patients referred from Ward 16? ◀

Anne Picton, Physiotherapist

This has been highlighted as an area of concern with regards to the respiratory needs of patients.

Rheumatology

3.11.27

Can region-wide agreement be reached regarding appropriate content for an accredited rheumatology training programme? ◀

Gina Ludlum, Senior Occupational Therapist

Previous study days had identified a training gap in the South West region. A questionnaire was sent to 100 health professionals (Nurses, Physiotherapists, OTs, Pharmacists) in Bristol and surrounding areas to ascertain the demand for local rheumatology training. 74% of respondents were actively involved in treating rheumatology patients – 89% of those respondents indicated that they felt they needed to increase their skills in the care of

rheumatology patients. The possibility of funding an accredited course is therefore being investigated.

3.11.28

Are rheumatoid arthritis patients benefiting from wearing night resting splints? « »

Gina Ludlum, Senior Occupational Therapist

Specific objectives of this audit were to ensure that a) patients or carers can correctly apply the splint, b) all patients receive written and verbal instructions and c) all patients are reviewed with 7-10 working days after fitting. Interim results indicate that most patients report less pain and swelling and fewer painful joints after using splints. Full report and recommendations to follow.

3.11.29

Rheumatology Case Note Audit ■

Dr John Kirwan

The aim of this audit was to improve the completeness and quality of patient case notes by comparing Rheumatology notes with data from a Trust wide audit of case notes. Results indicated that Rheumatology notes are broadly similar in completeness and quality to UBHT as a whole. Doctors are now encouraged to sign or initial all entries as appropriate. All records relating to patient enquiries, including telephone conversations with patients and their GP, should be recorded in the patient's hospital notes. Medical staff have been made aware of the fact that they did not always maintain patients records as well as they should.

Speech & Language Therapy

3.11.30

Is the Department meeting the Clinical Core Standards for Speech Therapy? ■ »

Sue Jones, Speech Therapist

Core standards relate to referral and appointment procedures, assessment, intervention and discharge. The overall aim is to provide an effective and efficient service. Audit data is currently being analysed.

PROBLEMS ENCOUNTERED & LESSONS LEARNED

"The Medical Directorate is large and dispersed and feedback and dissemination of audit projects has remained a key issue. A major role for the convenor and facilitator has been to continue to identify audit activity and develop the practice of audit within the sub-directorates; in particular to encourage re-audits for the completion of the audit cycle. Training is available to all staff through the Clinical Audit Central Office (with whom there is good liaison) and the first of regular audit teaching sessions to the junior medical staff has taken place.

Staff changes have presented some difficulties with the post of facilitator vacant for 4 months during 1999/2000. Proposal form completion remains a challenge.

The Clinical Audit Steering Group has met monthly and plays a leading role in promoting audit and pushing projects forward within the directorate. The active involvement of both the Directorate Manager and the Clinical Director has given this group authority, direction and impetus. The professionals allied to medicine have a good record for audit this year and a project from Speech and Language Therapy was short-listed for the Audit Oscars."

OBSTETRICS, GYNAECOLOGY & EAR NOSE AND THROAT**SUMMARY**

Number of 1998/9 roll-overs ◀	9*
Number of new audits ■	10
Number of re-audits ●	0
Number of ongoing monitoring projects ▶	1
Total number of audits	19
Number of current (i.e. uncompleted) audits ▶	4

* 1 of these projects appears in Appendix C

	1998/9	1999/2000
Multidisciplinary audits	3/10 (30%)	2/11 (18%)
Interface audits	0/10 (0%)	0/11 (0%)
Audits measuring against or resulting in development of standards or guidelines	9/10 (90%)	9/11 (82%)
Audits involving standards or guidelines which have been/will be developed following consideration of available evidence about clinical effectiveness	7/10 (70%)	9/9 (100%)
Audits examining a Cost Effectiveness issue	-	7/11 (64%)
Audits examining a Risk Management issue	-	10/11 (91%)
Audits which directly involved patients <i>(percentages above do not include 1998/9 roll-overs)</i>	0/10 (0%)	2/11 (18%)
 Audits resulting in changes in practice <i>(percentages above include 1998/9 roll-overs, but not 1999/2000 'current' projects)</i>	 5/10 (50%)	 11/15 (73%)
 Resulting in measurable benefits for patients <i>(percentages above include completed re-audits and ongoing projects only)</i>	 1/2 (50%)	 1/1 (100%)

EXEMPLAR AUDITS**3.12.1****How effective has Team Midwifery been? ◀***Jean Butler, Community Midwife, Granby House Clinic***Obstetrics**

Team midwifery, established in 1992, aims to give continuity of care, members of a team providing care in labour as well as antenatal and postnatal care. In 1998/9 an audit was undertaken to measure adherence to the following standards contained in the 1993 Changing Childbirth report (results also indicated):

- 1) At least 30% of women should have a midwife as the Lead Professional
Results: Team=59% Non-Team=57%
- 2) At least 30% of women delivered in a maternity unit should be admitted under the management of a midwife
Results: Team=40% Non-Team=37%
- 3) At least 75% of women should know the midwife who cares for them in labour
Results: Team=76% Non-Team=3%

The failure of non-team midwifery to meet standard 3 should be balanced against the fact that only 16% of non-team patients actually felt that it was important for them to have met the midwife beforehand (49% for team patients). Overall, team midwifery was proven to be a satisfactory method of care but not significantly more beneficial than non-team. Therefore there was no strong evidence to implement team care preferentially, although 84% of team patients said they were "very satisfied" with the care they received during labour and delivery, compared with 71% for non-team. Initial team breastfeeding rates were 80% compared to 68% non-team but this dropped to 64% and 62% respectively at two weeks. Postnatal visiting was changed from selective visits to daily for 6 or 7 postnatal days to see if initial rates could be maintained, but a quick re-audit carried out between November 1999 and January 2000 showed initial figures of 82% and 64% at two weeks – i.e. no change from before.

3.12.2

Is the Department of Obs & Gynae meeting Royal College guidelines for female sterilisation? ■

*Jane Mears, SHO, Obs & Gynae
Gynaecology*

47 sets of case notes from Laparoscopic Sterilisations were examined against 13 standards derived from the Royal College of Obstetricians & Gynaecologists Guidelines for Male & Female Sterilisation April 1999. The audit team looked for documented evidence that the following points had been discussed with the patient (results also indicated):

- Alternative Contraception 14/47 (30%)
- Benefits of Vasectomy 10/47 (21%)
- Irreversibility 47/47 (100%)
- Reverse success rates 1/47 (2%)
- Failure rate 47/47 (100%)
- Specified Failure rate 40/47 (85%)
- Risk of Ectopic pregnancy 41/47 (87%)
- Method of Access 47/47 (100%)
- Method of tubal occlusion 4/47 (9%)
- Risks of laparoscopy 11/47 (23%)
- Possibility of laparotomy 45/47 (96%)
- Post-op Contraception 28/47 (60%)
- Post-op menses 2/47 (26%)

Results show that some points were covered well, e.g. risk of ectopic pregnancy, method of access, however six standards did not achieve more than a 50% documentation rate and the correct failure rate of 1 in 200 was only specified in 2 cases. Following the audit, a proforma was produced for use at outpatient clinic for pre-procedure counselling and for completion on the day of operation. A re-audit of this topic is being considered for September 2000.

OTHER PROJECTS

Obstetrics

3.12.3

Is Department of Obs & Gynae following Royal College guidelines regarding ECV (External Cephalic Version)? ■

Dr Lisa Joels, Registrar

The Royal College recommends that ECV is offered to all women with uncomplicated breech presentations at term, to turn babies ready for normal delivery. This is successful in 40-60% of cases with a complication rate of <2% compared with the higher mortality & morbidity rates from the alternatives of breech delivery or caesarean section. A pre-audit of deliveries in August/September 1999 was done to show current rate of ECV uptake and outcome. Overall there were 30 breech presentations out of 752 deliveries (4%). Of these, 10 (33%) were offered ECV. 4 of the 10 (40%) were successful, the others proceeding to Caesarean sections. An ECV clinic has subsequently been set up on Tuesday mornings. ECV is to be offered to all suitable patients and uptake rate and outcome are to be audited in October/November 2000. A Patient Survey is being carried out to investigate satisfaction with ECV or reasons for declining. There is also a concurrent research project investigating the effect of tocolysis on the procedure.

3.12.4

Are we following Royal College standards on ventouse delivery? ◀

Willem Verproest, Senior Registrar

Ventouse delivery has been shown to be the preferred first choice for operative delivery. 222 cases were selected from deliveries between July & December 1998 and data compared against Royal College standards. Ventouse was found to be the instrument of first choice in 83% of cases (guideline=100%). 100% of cases recorded instrument used and primary

indication for instrumental delivery, however there was poor documentation of supervision, failure and reasons, and outcome (guideline=100%).

3.12.5

Are we adhering to proposed guidelines for anti-D immunoglobulin usage? «

Tony Kelly, Senior Registrar

Without prophylaxis 1 in 6 Rhesus D negative women who are delivered of a Rhesus positive infant will develop anti-D as a result of fetomaternal haemorrhage. This project established that UBHT is generally adhering to guidelines for Anti D usage as set out in UK Blood Transfusion working party recommendations (1991), with use of Kleihauer testing being better than the national average. Notekeeping of blood group and antibody checks needs to improve and a re-audit of antenatal sensitising events will be considered in 1 year's time.

3.12.6

What lessons have been learned from monthly peer review of a) fetal death or stillbirth after 13 weeks gestation and b) neonatal deaths? »

Deirdre Murphy, Registrar

A monthly peer review meeting is held to discuss all cases where there has been a fetal death or stillbirth after 13 weeks gestation and all cases of neonatal deaths (up to 28 days old) where the baby was delivered at St Michael's Hospital. This is a multi-disciplinary meeting involving obstetricians, midwives, neonatologists, nurses, radiologists, pathologists, paediatricians, geneticists, and management. Changes in practice are made as indicated after review.

3.12.7

Is Induction of Labour (IOL) at St Michael's being managed efficiently and safely? «

Miss Pippa Kyle, Consultant

This audit from 1998/9 assessed starting time of prostaglandin (PG) IOL, timing of PG doses, timing of deliveries and mode of delivery. Information was collected by proforma from the Ante-Natal Clinic, Ward and Central Delivery Suite by medical & midwifery staff between November 1997 and April 1998. 75% of IOL deliveries were out of working hours (17:00 to 08:30). The median IOL commencement time was 11:00. Mean length of labour was 17 hrs. There was a high operative delivery rate for primigravida women (31%). Following the audit, primigravida women now have first PG administered in evening, with second the following morning. A re-audit is planned for Spring 2000. Standards will be that 50% of the deliveries should be within working hours, with 15% deliveries between midnight and 08:30.

3.12.8

Can we establish consensus guidelines for the management of substance-using mothers? « »

Nick Elkington, Senior Registrar

St Michael's is funded to run a clinic for substance abusing mothers by Avon Health Authority. Data was collected between January 1997 and June 1999 in order to examine usage and success of this clinic and treatment of mothers and babies. Standards for the audit were as follows:

1. All substance using mothers should be identified during the ante natal period
2. All substance using mothers should be offered the facility of drugs antenatal clinic
3. A care plan should be drawn up and made available before admission for delivery
4. The baby should have a safe transition from birth to the community

78 Social Work/Neonatal forms were received from the Drugs Clinic, 70 from Delivery Suite, and 31 from Social Workers. A separate questionnaire was also completed by 11 mothers. 78 forms and questionnaires were received from SCBU. Audit leads have left successively over the duration of the project and a new lead is currently being identified to analyse data and produce recommendations.

3.12.9

Are cases of cleft lip and palate being detected antenatally? «

Karen Sohan & Mandy Freer (Supt. Radiographer)

Cleft lip and palate is a fetal anomaly which may be corrected surgically. Picking up cases by routine ultrasound enables appropriate counselling of parents. Cases of cleft lip & palate detected prenatally between 1991 and 1998 (inclusive) were obtained from ultrasound

records and checked against total numbers of babies born during this period with cleft lip and/or cleft palate (obtained from Stork database & notes examined to verify). Standards used for this audit were as follows:

1. American University Hospital - 13 out of 80 (16.25%)
2. 1998 Oxford Radcliffe results - 51% sensitivity, 100% specificity
3. St Mary's Hospital, Manchester, 1998 – 4/15 diagnosed with isolated cleft lip prenatally had other abnormalities found following delivery

14/34 cleft lip and/or palates were diagnosed prenatally (41.18%). Sensitivity was 50% (14 diagnosed, 28 scanned) and specificity 100% (cleft present in all cases diagnosed). No other abnormalities were found following delivery in cases diagnosed with isolated cleft lip. Detection rates are therefore within national limits. Sonographers have been encouraged to continue their present practice.

3.12.10

Would a policy of universal administration of serial antenatal corticosteroids to women with multiple pregnancies be justified? « »

Deidre Murphy, Senior Registrar

Evidence suggests that serial steroid administration in likely pre-term (22-34 weeks) deliveries is effective in reducing the likelihood of respiratory distress syndrome (RDS), however there are potential risks to mother and fetuses. Treatment is expensive but this needs to be weighed against the costs of admissions to special care (SCBU). The aim of this audit was to establish whether serial steroid administration in twin pregnancies reduces the incidence of neonatal RDS, SCBU admission and duration of admission. Currently between 15 – 20% of twin pregnancies in this unit receive serial antenatal corticosteroids. A specific objective of the project is to establish whether a policy of universal administration to all women with multiple pregnancies is justified. Data on mothers has been collected and data collection on twins is in process.

3.12.11

Is Third Degree Tear rate comparable to other units and are women managed appropriately? ■

Jackie Moxham, Clinical Risk Manager

Third degree tears in labour (a tear involving the anal sphincter) are assessed via the Incident Reporting System because of possible long term morbidity and risk of litigation. This audit found that only 7/53 cases identified on the Stork database for 1998 were actually reported. However, only 49 of these were found to be true 3rd degree tears once the patient notes were examined. Third degree tear rate is in line with other units (just over 1%) however not all tears were managed according to protocol (compliance rate 63-88%). In particular, documentation was poor and care plans did not differentiate sufficiently between 2nd and 3rd Degree Tears. The management protocol will therefore be reviewed for next CDS handbook. Meanwhile stickers have been produced to remind staff about postnatal care & follow-up. Antibiotics to be prescribed routinely after repair & staff reminded to fully document care & follow-up given. This topic is currently being re-audited.

3.12.12

Are Cardiocograph reports (CTGs) being stored according to protocol? ■

Maria Bradley, Midwife

56 sets of patient notes from March 1999 were measured against 5 standards for identification and storage of CTGs, derived from UKCC standards for records together with UBHT legal advice. The compliance rate for standards varied between 61% and 77% compared to 100% target. As a consequence of the audit, a protocol has been devised for CTG handling, labeling & storage, following consultation with midwives. A laminated notice of the protocol has been fixed to all CTG machines and ward clerks alerted to filing requirements. A re-audit will be conducted in late Summer 2000.

3.12.13

Are mothers given sufficient information to make an informed choice about baby feeding method? ■ »

Fiona Perkins, Community Midwife

This audit assessed information received by women and their understanding of it by means of questionnaires to staff (obstetricians & community midwives: n=41 or 62% of total) and

mothers (all women over 36wks gestation during July to mid August 1998: n=146). Provisional results indicate that 100% of staff would advise women to breastfeed; 81% of women felt they had received enough information on feeding; 73% of mothers were planning to breastfeed (inc. 31% of previous bottle or mixed feeders); 30% had not discussed feeding with Health Professional; 14% received no literature. Final results will be presented in May 2000 when recommendations and conclusions will be finalised.

3.12.14

Are we managing the labour and delivery of low risk women appropriately? ■

Sarah Green, Midwife

Low risk women are those with a singleton pregnancy, of cephalic presentation, at term, with no known obstetric or medical complication. This audit measured current care against proposals for midwifery led care for these women. Midwives completed a questionnaire focusing on the labour management, collecting data on a total of 90 patients. 63/90 (70%) women had a consultant as lead professional. There was a high normal delivery rate and a high rate of continuous fetal monitoring. The largest reported reason for obstetric involvement was for fetal distress. Audit results supported the need for a midwifery unit to be established on CDS. Implementation of the unit is in progress and management of women on the unit will be audited once it is fully operational.

Gynaecology

3.12.15

Are Regional Cancer Organisation (RCO) guidelines for Stage 1 Ovarian Cancer being followed? ■ ▶

Adeola Olaitan, Subspecialty Trainee in Oncology

The aim of this audit is to verify the accuracy of staging and the appropriateness of management of women with Stage 1 Ovarian Cancer. The RCO issued guidelines in 1997 and subsequently COG (Dept of Health) guidelines have also been implemented. Data has been gathered for all stage 1 ovarian cancer patients seen during 1997 and 1998 (20 patients in total for St Michael's) and is currently being analysed. It is proposed to expand this project into a regional audit.

Family Planning

3.12.16

What is the rate of complications amongst patients having suction terminations? ◀

Dr Louise Kane, Family Planning Clinic

This audit was prompted by concern about the perceived level of complications (retained products, perforation, failed abortion, infection) following STOPs under GA performed at St Michael's Hospital. STOP is a very common operation (on average 540 per year) and an expected complication rate can be approximated from published literature. 200 operations from July to December 1998 were examined & complication rates measured. Overall complication rates (4.5%) were in line with those in the literature (5%). Most complications were in women over 10 weeks gestation. A guideline exists to give cervical preparation (e.g. misoprostol) to everyone under 18yrs or over 10 weeks gestation, however a preparation was given to only 5 women in this audit. Following the audit, misoprostol is now used for all patients over 10 weeks gestation or nulliparous. This is inexpensive & reduces blood loss but there is no clear dosage and misoprostol is unlicensed for use in this way at present. This places certain responsibilities on the prescribing doctor to ensure informed consent, keep named patient book and ensure adequate follow-up. Misoprostol can cause fetal abnormalities if administered and no termination follows. Bacterial vaginosis infection was only detected in 1% of patients, whereas literature would indicate a 10-30% infection. The test has since been modified and detection rate is now about 25%.

ENT

3.12.17

Is the ENT Dept following UBHT guidelines regarding documentation of consent in tonsillectomy? ■

Helena Constantinides, SHO, ENT

UBHT guidelines for consent are published in the Medical Staff Handbook and are based on Royal College guidelines. For the purpose of this audit, three standards were derived with nominal targets of 100% and a random set of 50 case notes from Tonsillectomy Patients between August and October 1999 examined. 100% of notes included completed consent form. In 94% of cases, the consenting doctor was able to undertake procedure. However, risk of haemorrhage was only documented in 10% of notes, and risk of infection in only 2%. Although a low adherence to guidelines was shown with regard to documentation of risk, it was suggested that consent would be better audited by a patient survey to measure whether patients have been able to make informed decisions. This is now planned for Summer 2000, to be followed by the introduction of new leaflets explaining risks for common procedures, if found to be necessary. As a result of post-audit discussion, a stamp has been introduced for listing of reasons for surgery.

3.12.18

REGIONAL AUDIT

Are regional ENT Depts following best practice for the treatment of pharyngeal pouch? ■

Mr Griffiths, ENT Consultant

Pharyngeal Pouch affects 1 in 700 people over the age of 75 years and causes significant morbidity, as highlighted in the 1998/9 NCPOD report. In the past 5 years, surgical treatment has evolved from routine open surgery to endoscopic techniques. An audit was conducted in April 1999 with the aim of defining regional centre workloads and costs and from this to define best practice. Treatment of choice in cases of pharyngeal pouch where there is no problem with surgical approach, is endoscopic stapling in all age groups, due to the decrease in complication rates. As endoscopic stapling was already the method of choice being followed in the ENT department at St Michael's, no local changes came out of the audit. Regionally, the above statement has been circulated and is to be taken as the current definition of best practice. An audit of outcome against reasons for surgery is to be considered for early 2001.

3.12.19

Are Head & Neck Cancer referrals being classified appropriately? ■

Steve Wood, ENT Registrar

All GP referrals of adult patients from December 1998 to February 1999 (inclusive) were examined (a total of 357 referrals). Of these 87 (24%) were classified as urgent by the symptoms described. However, only 16 of these were requested as urgent by the GP. At present, there are 4 slots per week to see urgent patients, whereas these figures suggest 8 slots per week are needed in order to see these patients within the 2 weeks rule laid down by the Government. The number of urgent slots cannot be increased, but any urgent referrals are added to the list. A stamp has been devised for use on referral letters to enable consultants to indicate whether cases are urgent/soon/routine. Urgent cases are to be seen within 4 weeks unless 2 weeks specified for cancer. Consultants do not rely on GP's assessment. The time cancer patients are waiting is being looked at and will be monitored by the Trust Cancer Office, once operational.

PROBLEMS ENCOUNTERED & LESSONS LEARNED

- "A number of audits highlighted poor note-keeping - regular audits of documentation to be considered
- Continued problem with project leads leaving - need to work towards more 'top-down' (i.e. consultant/department led) audits
- Continued problems with implementing change - audit leads to be identified in each specialty with this responsibility"

ALSO SEE...

Critical Care – “What problems are being experienced with regional anaesthesia for caesarian section?” (3.8.3); “Can recovery times at St Michael’s be reduced?” (3.8.16); “How successful is the newly standardised infusion mixture in post-operative epidural analgesia for gynaecology patients?” (3.8.20)

For Paediatric ENT see **Children’s Services**.

OCCUPATIONAL HEALTH

SUMMARY

Number of 1998/9 roll-overs ◀	1
Number of new audits ■	3
Number of re-audits ●	0
Number of ongoing monitoring projects ▶	2
Total number of audits	6
Number of current (i.e. uncompleted) audits ▶	3

	1998/9	1999/2000	
Multidisciplinary audits	4/4 (100%)	3/5 (60%)	
Interface audits	3/4 (75%)	0/5 (0%)	
Audits measuring against or resulting in development of standards or guidelines	4/4 (100%)	2/5 (40%)	
Audits involving standards or guidelines which have been/will be developed following consideration of available evidence about clinical effectiveness	1/4 (25%)	1 /2 (50%)	
Audits examining a Cost Effectiveness issue	-	4/5 (80%)	
Audits examining a Risk Management issue	-	5/5 (100%)	
Audits which directly involved patients <i>(percentages above do <u>not</u> include 1998/9 roll-overs)</i>	3/4 (75%)	5/5 (100%)*	*Patients are Staff
Audits resulting in changes in practice <i>(percentages above include 1998/9 roll-overs, but not 1999/2000 'current' projects)</i>	1/3 (33%)	2/3 (67%)	
Resulting in measurable benefits for patients <i>(percentages above include completed re-audits and ongoing projects only)</i>	2/2 (100%)	1/2 (50%)	

3.13.1**What interventions do UBHT staff need in order to combat stress? ◀ ▶**

Dr P Bennett, Head of Clinical Health Psychology

This current audit is seeking to identify levels of stress amongst UBHT staff (using formal psychometric measures). The results will provide an indication of need which can be used to direct appropriate interventions.

3.13.2**Are we adhering to agreed local guidelines for the management of needlestick injuries? ▶**

H Cartwright, Occupational Health Nurse

The Government requires that UBHT has effective local guidelines to ensure that staff exposed to needlestick injuries receive post-exposure prophylaxis.

3.13.3**Is the Hepatitis B status of staff who regularly carry out exposure-prone procedures being adequately monitored? ▶▶**

H Cartwright, Occupational Health Nurse

The trust is required to produce six monthly statistics on Hep B status - see HS(93) G40. Any identified areas of concern are fed back to Occupational Health, the Director of Human Resources and Avon Health Authority.

3.13.4**What motivates/de-motivates NHS staff and local employees? ■ ▶**

R Philipp, Consultant

This piece of audit/research, being carried out in association with the Nuffield Trust and the new national institute of Medical Humanities is at a preliminary stage. It is hoped that the project may lead to ways of reducing the burden of mental ill-health in the workplace.

3.13.5

What is the level of awareness about the Occupational Health Service amongst SpRs in the South West region? ■ ▶

R Phillip, Consultant

The Department has been awarded a substantial grant to fund audit/research into this topic at the behest of the NHS Executive. At the time of, 313 questionnaires had been returned by SpRs.

3.13.6

What levels of stress are being experienced by Anaesthetists? ■

R Phillip, Consultant

There has recently been a suggestion that Anaesthetists may be suffering an undue level of 'distress'. It is hoped to publish the results of this audit. The project may also be repeated region-wide.

ONCOLOGY

SUMMARY

Number of 1998/9 roll-overs ◀	1	
Number of new audits ■	12	
Number of re-audits ●	1	
Number of ongoing monitoring projects ▶	0	
Total number of audits	14	
Number of current (i.e. uncompleted) audits ▶	4	
	1998/9	1999/2000
Multidisciplinary audits	4/5 (80%)	3/13 (23%)
Interface audits	0/5 (0%)	0/13 (0%)
Audits measuring against or resulting in development of standards or guidelines	4/5 (80%)	13/13 (100%)
Audits involving standards or guidelines which have been/will be developed following consideration of available evidence about clinical effectiveness	4/5 (80%)	11/13 (85%)
Audits examining a Cost Effectiveness issue	-	3/13 (23%)
Audits examining a Risk Management issue	-	1/13 (8%)
Audits which directly involved patients	0/5 (0%)	1/13 (8%)
<i>(percentages above do <u>not</u> include 1998/9 roll-overs)</i>		
Audits resulting in changes in practice	3/7 (43%)	9/10 (90%)
<i>(percentages above include 1998/9 roll-overs, but not 1999/2000 'current' projects)</i>		
Resulting in measurable benefits for patients	0/0 (0%)	1/1 (100%)
<i>(percentages above include completed re-audits and ongoing projects only)</i>		

EXEMPLAR AUDITS

3.14.1

Are we stem cell harvesting the right patients effectively and safely? ■

Dr Jackie James

This project was shortlisted for UBHT's 1999/2000 'Audit Oscars'

Stem cell harvesting is an expensive intervention but is now accepted as a recognised part of the treatment for many haematological conditions. In the absence of National Guidelines/Standards, the Unit has developed local guidelines. The aim of this audit was to assess whether previous practice was in line with these guidelines and whether this had resulted in safe and efficacious outcomes without undue waste of resources.

The audit covered the period 16 Feb 1998 to 31 July 1999 yielding a total of 64 Avon Haematology Unit patients who had undergone harvest in this period. Data was collected to address the following specific objectives:

- To ensure that only appropriate patients are being harvested
- To ensure the efficacy of the mobilisation schedules being used
- To ensure that all patients have virological screening performed prior to harvesting
- To determine the number of 'rainy day' harvests subsequently used
- To determine the number of 'planned autograft' harvests subsequently used in autografts
- To ensure that harvests are not continuing to be stored for patients who have died or in whom transplant has become inappropriate
- To ensure efficacy of transplant procedures

Overall results indicated that patients are being appropriately and safely harvested with efficacious outcomes. Changes to address the following issues have been implemented within the Unit:

- An additional indication for harvesting (multiple plasmacytomas) to be included in the guidelines
- Patients with leukaemia should have a bone marrow test in the two weeks prior to harvest, to avoid inappropriately harvesting patients who are not in complete remission
- One area of concern identified was the continued storage of harvest for deceased patients which potentially wastes resources. Steps have been taken to advise the Southmead Storage Laboratory of patient deaths.
- The audit also highlighted variations in practice regarding GCSF and a more detailed review is currently being undertaken and further discussions will be aimed at achieving consensus.

3.14.2

Which patients are receiving post-mastectomy radiotherapy? ■ ▶

Dr Candish, SpR

It is currently recommended that patients at high risk of loco-regional recurrence receive chest wall or chest wall and nodal radiotherapy. This retrospective audit looks at which post mastectomy patients are receiving radiotherapy to chest wall with/without nodal radiotherapy. This exercise is intended to enable the production of guidelines for such treatment. Results are currently being analysed and prepared for presentation.

OTHER PROJECTS

3.14.3

Are high grade glioma patients seen by Oncologists being appropriately assessed for prognosis and treatment? ■ ▶

Dr Hugh Newman

This project, which is at the data collection stage, looks at the diagnosis, management and treatment of patients with brain tumours. Standards have been taken from Medical Research Council Prognostic Guidelines with additional locally defined score groupings. The audit is being undertaken by two Clinical Oncologists and a radiographer and will cover the period from October 1999 to September 2000. Results and any proposed change will be evaluated by the end of 2000.

3.14.4

Does the standard of hand-washing within BOC comply with recommendations in the Trust Infection Control Manual issued August 1999? ■ ▶

Polly Gingell, Staff Nurse

A Trust-wide survey of handwashing by the Trust Infection Control team led to concerns about the standard of handwashing. In collaboration with the Infection Control Team, BOC has defined local standards for handwashing. This audit involved personal observation of staff in designated patient areas. Results are currently being analysed and prepared for presentation.

3.14.5

Are small cell lung patients being treated in accordance with agreed standards? ■

Dr Falk

This retrospective audit, based on the Royal College Radiologists' 'COIN' Guidelines, looked at the treatment and toxic death rate of small cell lung cancer patients seen at BOC during the whole of 1998 (46 patients seen by 6 consultants). Overall the standards are being met.

3.14.6

Are we achieving national standards in our management of acute leukaemia? ■

Dr S Wexler

The unit has managed 39 cases of acute leukaemia within the last year. The proportion of patients who achieve complete remission is in line with national averages. The epidemiology of patients treated for acute leukaemia was reviewed. Results showed that BOC practice was in line with national norms. We are not doing all the appropriate tests advisable at diagnosis (e.g. tissue typing and cytogenetics), however, and in future we are going to try and complete all tests when patients present.

3.14.7

Is our management of myeloma consistent? ■

Dr S Wexler

36 newly diagnosed myeloma patients were treated by the Haematology/Oncology service (77 myeloma patients in total) during the period February 1998 – October 1999. The treatment of myeloma patients varies and the purpose of this audit was to look at the types of treatment used and the outcomes of therapy. The use of bisphosphonates was a particular focus of this project. Results showed that despite evidence that bisphosphonates help prevent

bone events and relieve pain, only half our patients who were eligible were treated in this way. The second major question concerned entry into trials. Only 10% of eligible patients were entered into national trials. As a consequence of this audit, appropriate use of Bisphosphonates will be increased and consultants will enter patients into clinical trials where possible. This topic will be re-audited.

3.14.8

Is our analgesic prescribing meeting agreed standards? ■

Dr Hawkins

This audit looked at the prescribing habits of junior medical staff, before and after teaching sessions. Overall, prescribing of analgesics was found to be excellent. Areas for improvement were noted as (a) specifying morphine formulation and frequency of change of fentanyl patch, (b) dose for breakthrough pain and (c) laxatives for patients on opioids. The quality of analgesic prescribing is high and therefore there are no plans for further audit.

3.14.9

Is our prescribing of gastroprotection meeting the agreed standards? ●

Dr Hawkins, SpR

This re-audit of a project first undertaken in 1998 looked at risk factors and drug choice. Following the original audit guidelines were updated and circulated. The re-audit noted improvement in the main elements of the standard i.e. (a) lower doses of low toxicity NSAIDs, (b) prescribing prophylaxis for high risk patients, (c) non-prescription for low risk patients and (d) better choice of prophylaxis. At the same time there was room for improvement in (a) consideration & documentation of risk factors, (b) awareness of high risk combination treatments and (c) choice of prophylaxis. The guidelines are to be re-issued in laminated form through pharmacy, circulated and posted in appropriate places.

3.14.10

Is our management of neutropenic sepsis in accordance with guidelines? ■

Dr Jamil

This condition constitutes a major proportion of oncology emergency admissions. Prompt and effective treatment is vital and improves survival and the patient's quality of life. The audit looked at the tests carried out on admission and the times from admission to test. In general investigations were adequate with the exception of measurement of antibiotics level which was only done in around 60% of patients. Documentation of time of patient arrival/clerking was sometimes incomplete. The audit showed that many of the agreed standards were met, although there was a need to improve awareness of the guidelines among junior medical staff from the beginning of their rotation through the post. The induction programme for SHOs has been updated to include this.

3.14.11

Is spinal cord compression managed in accordance with agreed standards? ■

Dr H Alexander

Prompt treatment of spinal cord compression is essential if function is to be maintained. If treatment is started within 24 hours the onset of symptoms neurological damage may be reversible. This project aimed to assess whether patients presenting with suspected cord compression at hospitals throughout the Avon & Somerset area were being investigated and treated within 24 hours. This was a retrospective audit, but results showed that standards were not being reached, often as a consequence of delay in transfer of patients from other hospitals to BOC. Once patients were admitted to BOC/BRI, investigations and treatment were organised promptly in accordance with protocol. Discussions with the Radiology department has resulted in agreement that patients with suspected malignant cord compression should have an urgent MRI of the whole spine within 24 hours (weekends included). An educational pamphlet will also be given to doctors from referring hospitals as part of a training initiative.

3.14.12

Unified best practice in treatment of LOC grade non-hodgkins lymphoma ■

Dr Sophie Otton, SpR

Non-Hodgkins Lymphoma is classically a relapsing and remitting disease. It is extremely common. This project looked at current practice in treatment regimes utilised by the consultant body at the Avon Haematology Unit, in terms of risk stratified therapies, in an attempt to measure current practice against recognised gold standards of care. Consensus is achieved on the optimal first, second and third line therapies to be in the event of disease progression. Effort was made to create a unified approach to a difficult patient group. Guidelines have now been drawn up and a re-audit is planned in a year's time.

3.14.13

Can radiotherapy waiting times be reduced? «

Judy Cox, Superintendent Radiographer

Based on Royal College standards, this audit looked at where avoidable delays could be removed to reduce radiotherapy waiting times. Results indicated that standards were not being met. A system of shift working on two treatment machines has therefore been introduced to improve waiting times and increase patient throughput. Waiting times will now be re-audited to evaluate benefits of change.

3.14.14

Is the Avon Haematology Day Unit Fast Track Pharmacy Service meeting its one hour turnaround time standard? Is the standard achievable & realistic? ■ ▶

Dr Raymond Dennis, Staff Grade

The purpose of this audit was to demonstrate the quality of service provided to patients and to identify areas for improvement. There was local concern about increasing prescription turnaround times leading to patient/staff dissatisfaction. A standard of one hour turnaround time for prescriptions (from prescription request leaving Haematology to prescription being supplied) had been set at a previous audit. All clinical staff, receptionists, pharmacy staff, porters & patients participated in the audit which looked at 290 patient attendances. The mean turnaround time was 3.5 hours. In short, there was 0% compliance with standard. The following causes of delays were identified: (1) inadequate priority in dispensing service, (2) shortage of pharmacy staff, (3) inefficiency of faxing process and (4) collection service could be improved by air tube conveyor system. Recommendations are as follows: (a) extend pre-pack cupboard, (b) higher priority in pharmacy dispensing service, (c) electronic prescribing and (d) satellite pharmacy unit in the building. Audit results and suggestions to be presented to General Manager for inclusion in Business Plan.

PROBLEMS ENCOUNTERED & LESSONS LEARNED

"Problems and deficiencies of Directorate arrangements for audit, in particular the monthly audit meeting, have been recognised and discussed. The need for wider participation and longer term structuring of audit projects is being addressed. The inclusion of Clinical Haematology into the directorate audit framework has been successful and productive."

ALSO SEE...

Specialty Services – "Is Granisetron being appropriately prescribed In Paediatric Oncology?" (3.18.6).

For other Paediatric Oncology, also see **Children's Services**.

OPHTHALMOLOGY

SUMMARY

Number of 1998/9 roll-overs ◀	3*
Number of new audits ■	8
Number of re-audits ●	3
Number of ongoing monitoring projects ▶	1
Total number of audits	14
Number of current (i.e. uncompleted) audits ▶	5

* 1 of these projects has been postponed (see Appendix C)

	1998/9	1999/2000
Multidisciplinary audits	2/8 (25%)	3/12 (25%)
Interface audits	0/8 (0%)	2/12 (17%)
Audits measuring against or resulting in development of standards or guidelines	3/8 (38%)	12/12 (100%)
Audits involving standards or guidelines which have been/will be developed following consideration of available evidence about clinical effectiveness	2/8 (25%)	7/12 (58%)
Audits examining a Cost Effectiveness issue	-	4/12 (33%)
Audits examining a Risk Management issue	-	7/12 (58%)
Audits which directly involved patients <i>(percentages above do <u>not</u> include 1998/9 roll-overs)</i>	0/8 (0%)	0/12 (0%)
Audits resulting in changes in practice <i>(percentages above include 1998/9 roll-overs, but not 1999/2000 'current' projects)</i>	0/5 (0%)	8/9 (89%)
Resulting in measurable benefits for patients <i>(percentages above include completed re-audits and ongoing projects only)</i>	0/3 (0%)	1/4 (25%)

EXEMPLAR AUDITS

3.15.1

What is the local rate of post-operative endophthalmitis? ▶▶

Mr Andrew Waldock, SpR

Endophthalmitis is a rare but severe ocular infection which requires prompt intervention after diagnosis. The incidence of this condition within an eye unit needs to be known on an annual basis and should be monitored locally over time and compared to national figures. In addition this audit investigated the treatment of individual cases against evidence based treatment standards, and also looked at the reporting rate on post op infection forms.

This year's incidence was 0.65% (21 cases), compared to 0.35% in the previous year and a National incidence rate of 0.3%. Good final visual outcomes (88% improved) and low culture positive rates (29% - 5 cases) for infection suggest more presumed rather than actual cases are treated which may account for the higher than national rate. The reporting rate on forms was 62%. There was no pattern to the type of cataract procedure performed, operating theatre used, season or particular surgeon performing the procedure.

Doctors have been reminded of the need to report cases on the critical incident forms and also to be vigilant on infection control. The cataract operation sheets are to be modified to allow for formal documentation of the fact that Povidone iodine (a necessary medication) has been applied after the initiation of the anaesthetic - the results showed no evidence that iodine had been applied, although in reality this had almost certainly been done.

Evidence base:

1. Javitt JC et al. National outcomes of cataract extraction: Retinal detachment and endophthalmitis after outpatient surgery. Cataract Patient Outcomes Research Team. Ophthalmology 1994; 101: 100-105.
2. Norregaard JC et al. Risk of endophthalmitis after cataract extraction: results from the International Cataract Surgery Outcomes Study. Br J Ophthalmol 1997; 81: 102-6.
3. Desai P. The National Cataract Surgery Survey II. Clinical Outcomes. Eye 1993; 7: 489-494.
4. Bainbridge JWB et al. Intraocular lens implants and risk of endophthalmitis. Br J Ophthalmol 1998; 82: 1312-15.

3.15.2

How does BEH cataract surgery compare with national norms? ■

Eric Mayer SpR

The National Cataract Survey 1997/1998 reported on 19000 patients who had surgery between September and December 1997. It represents one of the largest clinical datasets for a single surgical procedure in the NHS. The national database was compiled from a collection of local audits in over 100 eye units in the country. At the end of the local audit each unit retained its own data to facilitate a direct comparison with the national figures when published. BEH did not take part in the national survey, so this year's cataract audit was designed using the national methodology and audit tools to produce local results for comparative purposes as per other eye units.

200 consecutive operations carried out at BEH were followed up for 3 months post-op looking at visual outcome and per/post op complications. The audit confirmed good practice at BEH. 86% of patients saw 6/12 or better after surgery (measure of final visual acuity). This is exactly the same figure as the national average. 5.69% of BEH patients had some kind of complication during surgery compared to 7.5% nationally. The rate of vitreous loss was 4.27% at BEH (4.4% nationally). The results were prepared and presented before publication of the national data and are at present being re analysed in some areas to enable further comparison of findings.

Evidence base:

1. Courtney P. The national cataract surgery survey. I: methods and descriptive features. *Eye* 1992;6:487-92
2. Desai P. The national cataract surgery survey. II: Clinical outcomes. *Eye* 1993;7:489-94
3. Desai P. The national cataract surgery survey. III: Process measures. *Eye* 1993; 7: 667-71
4. Desai P, Reidy A, Minassian DC. Profile of patients presenting for cataract surgery in the UK : National data collection. *Br J Ophthalmol* 1999;83: 893-896.
5. Desai P, Minassian DC, Reidy A. The National Cataract Surgery Survey 1997/98. A report of the results of the clinical outcomes. *Br J Ophthalmol* 1999; 83: 1336-1340.

OTHER PROJECTS

3.15.3

What surgical adverse events occurred at BEH and were they reported on the critical incidence form? ●

Chris Illingworth, SpR

Traditionally adverse events have been summarised and analysed annually as part of the BEH audit programme. This year 46 capsule ruptures and 20 other less serious events were reported. Analysis of the data showed that no individual surgeon had a significantly higher than average number of adverse events. The reporting rate on the critical incidence forms for capsule rupture was 73%. A problem with the coding of operation details and clinical coders' interpretation of the notes was revealed as part of the audit, so coding practice has been changed and doctors now clearly state in the notes whether an adverse event has occurred. The need to report adverse events on the new critical incidence form has once again been stressed to all clinicians.

3.15.4

How does local practice compare with national standards for trabeculectomy? ◀

Andy Frost, SpR

This project was adapted from the National Audit of Trabeculectomy with the overall aim of enabling a direct comparison of BEH results with national data when published. The audit assessed surgical techniques, outcomes and complications of trabeculectomy surgery. At the time of presentation limited outcome data from the national project was available: local results showed that BEH performed to a standard above the national average for outcome of surgery. Areas of concern were a) that per op medication was being used in only 52% of high risk cases, b) that average waiting times were above the desirable level, and c) that documentation of operation procedures was poor. A local standard for waiting times was subsequently set and a new formal surgical sheet produced for inclusion in the notes to include a reminder of risk factors for failure when per op medication should be considered.

3.15.5

Are we providing a quality cost-effective paediatric optometric service in the community? ◀

Rosemary Lumb, Optometrist

The optometrists at BEH were keen to demonstrate that they offered a high quality service to patients and to explore ways in which the service could be improved. Lack of published evidence of best practice led to the development of local standards of care. An audit of these standards encompassed 410 patients seen during March/April 1999 (121 at BEH and 289 in community clinics). Overall the service was shown to be of high quality but key findings were a) that for 50% of the patients seen at BEH there was no clinical reason why they could not have been seen in the community, b) no discharged patients had a letter sent to their GP, and c) that family history alone was not a good referral indicator. As a consequence of the audit, back-up support is to be found to send letters to GPs on discharge. This will also serve to raise the profile of the community service amongst GPs. Guidelines are being drawn up to enable patients to be seen in the community rather than at BEH. This will mean that patients are seen more quickly. Consultants agreed they were happy for optometrists to perform fundus checks at BEH and orthoptists have agreed not to refer on the basis of family history alone.

3.15.6

Is the rate of specific adverse reaction to intravenous fluorescein angiography (IFA) similar to published evidence and is the current IFA procedure safe and effective for the management of patients who experience adverse reactions? ■

Mei-Lin Law, Lecturer/Nurse Practitioner

IFA is a useful ocular diagnostic procedure and involves the direct injection of a dye into the blood via a vein. Evidence shows that on average 5% of patients will experience some kind of adverse reaction varying from mild nausea to anaphylactic shock to cardiac arrest. This audit was undertaken because the lead nurse was concerned that the current procedure practices on IFA were not as effective and efficient as they should be in caring for patients who suffer an adverse reaction to IFA. 11 patients (6.5%) showed a range of signs and symptoms during and after IFA. 7 of these patients had no known allergies. All patients were treated according to the current procedure guidelines. One patient needed both Piriton and steroid treatment but a further two needed Piriton only. In these cases treatment was delayed as a doctor had to be called to prescribe the Piriton. As a consequence of this audit, the procedure policy was changed so that the nurse is now able to give Piriton to IFA patients who have reactive symptoms instead of having to call a doctor to prescribe the medication. In addition, previously a doctor ordered the IV Fluorescein investigation to be carried out and a second doctor was required to prescribe the Fluorescein on the day of the procedure. As a result of this audit, the doctor who ordered the IV Fluorescein investigation is deemed to prescribe both the procedure and the drug in advance of the test (which may take place a few days later) thereby avoiding the need for a second doctor to prescribe on the day. This has improved care for the patient by streamlining the procedure practises to enable a more effective and efficient service.

3.15.7

What is the quality of suspected glaucoma referrals from General Ophthalmic Service optometrists, and what are the waiting times for appointments? ■

Rosemary Lumb, Optometrist

In this audit over 1000 referrals to the "fast-track" evening glaucoma clinic were analysed. Since the introduction of "free" NHS sight tests for OAPs, the numbers of referrals have increased. A waiting time standard of ten weeks was agreed but despite the clinic staffing levels expanding, average waiting times have increased from 4 weeks when the clinic first began in July 1997, to approximately 14 weeks in January 2000. Results showed that the accuracy of referral varies. Optometrists referring on the basis of two or more suspicious findings were far more likely to be "correct" in their referral, when compared to those referring on the basis of a single index of suspicion (with the possible exception of suspicious optic disc appearance). Raised or asymmetrical Intra Ocular Pressure alone (measured with a non-contact tonometer), or unrepeated visual field defects alone were far less accurate than referral based on suspicious optic disc appearance. Overall 32% of referrals were false

positives i.e. no glaucoma was diagnosed. Guidelines to GPs will be amended to encourage referral on the basis of the results found. The findings of this audit will also be fed back into the GOS optometrists, hopefully improving the standard of referral letters and the overall true positives with correspondingly fewer false positives. If the number of false positives can be reduced, valuable new patient appointments will become available and waiting times will decrease, as well as reducing unnecessary anxiety for the patients who are proved to be normal after all.

3.15.8

Can referral letters from community optometrists be improved in terms of patient and clinical information? ■ ▶

Fred Giltrow Tyler, Principle Optometrist

Letters of referral received by BEH from community optometrists are of variable quality both in terms of administrative and clinical content. An audit team including a representative from community optometrists and medical records, optometry and doctors at BEH has been established to discuss and set standards for the content of referral letters. The aim is to identify problem areas from the perspective of both the community and BEH and to seek solutions to address them. The audit will measure a sample of referral letters against the agreed standards. Also the quality of the general optometric referrals will be compared with published papers on outcomes of referrals.

3.15.9

Are intra-ocular lens power calculations reaching acceptable standards? ■ ▶

G N Shuttleworth, SpR

Intra-ocular lens (IOL) power calculation is a critical component in determining the refractive outcome of cataract surgery. Inaccuracy is immediately evident to the patient. Recently new theoretical IOL formulae have been developed with improved accuracy. It is therefore important to determine whether BEH current practice reaches acceptable standards and whether the new formulae should be adopted.

3.15.10

Are patients who attend/are referred to A&E appropriate? ■ ▶

Karen Goodison

The aim of this project is to move towards an appointment system in the A&E department. At present patients have a long wait, and the impression of the staff is that many of the patients who attend or are referred to the hospital by GPs are not appropriate cases to be seen in the A&E department. This pre-audit will identify the current pattern of referrals. The current referral guidelines are to be used for baseline analysis and one of the project objectives is to update these guidelines for GPs.

3.15.11

Why is the first outpatient appointment cancellation rate so high at BEH? ■ ▶

John Sparrow, Consultant Ophthalmologist

BEH consultants' new appointment cancellation rates were amongst the highest recorded for UBHT. This audit aims to investigate the reasons why appointments have been cancelled, to see how many of these were avoidable and to look at what additional wait the patients have. Data is being collected prospectively for all new patient hospital cancellations.

3.15.12

Can we reduce cancellations on lists for surgery? ●

Damaris Jones, theatre Sister

This audit reviewed reasons for cancellations of surgery for patients booked onto lists, initially for the period April-September 1999. The objective was to identify if any change in practice could be introduced to reduce the levels of cancellations. Main reasons for cancellations were found to be: a) patient DNA, b) patient not fit and c) procedure not required. Action points subsequently agreed were:

- 1) All minor op patients and non pre-op assessed patients to have a slip to confirm they attend. All other patients told to phone the ward 24 hours in advance
- 2) Pre op assessment to thoroughly assessing patients fitness and include giving a full explanation of the treatment
- 3) Any patients contacted by the hospital will be contacted by telephone

After these action points were implemented, a re-audit was undertaken in March 2000. This showed an improvement but also highlighted the need for more accurate recording of theatre sessions by theatre staff.

3.15.13

Are all aspects of nursing care adequately documented on nursing care plans in A&E?

■ ▶

Annie Hinchcliffe, Sister, A&E

Nursing care plans in the A&E department record all aspects of nursing care given to patients by Nurse Practitioners. Nurse Practitioners work autonomously and it is therefore essential to record accurate, concise and comprehensive information. Local standards have been agreed to measure the quality of record keeping and documentation based on published standards in the literature. Data has been collected and a report is currently being finalised.

3.15.14

Are ophthalmology case notes of a high enough quality to satisfy both Trust CNST and local BEH requirements? ●

Anthony Cullinane, SpR

The objectives of this audit were:

- To see whether areas of weakness highlighted in last year's audit had improved
- To compare the results of this year's CNST audit (18 sets of notes reviewed by a non clinician) with a sample of 53 sets of notes reviewed by an ophthalmologist
- To measure against additional specific ophthalmology standards

Results showed that recording on the prescription sheet and discharge summary had improved since last year's audit. The findings agreed with the CNST audit results in most areas. The general overall state of the notes was high. Areas of weakness included not signing the notes and poor documentation of allergies. The main area of weakness highlighted in the ophthalmology standards was that visual acuity was not recorded at every visit and that it was not always clear who gave the local anaesthetic block and what drug or dose had been administered. As a consequence of the audit, a) standards are being circulated to all clinicians, b) the hospital has introduced a signature book to record the full name signed and printed, position and bleep no of all clinicians who record in the notes and c) the procedure for recording of allergies is being reviewed.

PROBLEMS ENCOUNTERED & LESSONS LEARNED

"A focus on aspects of process has identified potential for adjustments to practice in the past year's audits. The technical medical outcome audits have confirmed adequate standards as judged by comparison to national figures, whilst risk management audits have highlighted areas deserving re-audit in the future. The formation of a multi professional hospital standards committee (whose main remit is audit) will provide increased scope for encouraging multi professional practice audit and improving the feedback and dissemination of audit results."

ALSO SEE...

Critical Care – "How many complications arise from the use of Regional Eye Blocks in Bristol Eye Hospital?" (3.8.19)

PATHOLOGY

SUMMARY

Number of 1998/9 roll-overs ◀	2*
Number of new audits ■	7
Number of re-audits ●	3
Number of ongoing monitoring projects ▶	3
Total number of audits	13
Number of current (i.e. uncompleted) audits ▶	0

* These projects appear in Appendix C

	1998/9	1999/2000
Multidisciplinary audits	10/20 (50%)	11/13 (85%)
Interface audits	1/20 (5%)	0/13 (0%)
Audits measuring against or resulting in development of standards or guidelines	16/20 (80%)	9/13 (69%)
Audits involving standards or guidelines which have been/will be developed following consideration of available evidence about clinical effectiveness	12/20 (60%)	4/9 (44%)
Audits examining a Cost Effectiveness issue	-	2/13 (15%)
Audits examining a Risk Management issue	-	6/13 (46%)
Audits which directly involved patients <i>(percentages above do not include 1998/9 roll-overs)</i>	0/20 (-%)	0/13 (0%)
Audits resulting in changes in practice <i>(percentages above include 1998/9 roll-overs, but not 1999/2000 'current' projects)</i>	12/18 (67%)	10/13 (77%)
Resulting in measurable benefits for patients <i>(percentages above include completed re-audits and ongoing projects only)</i>	0/10 (-%)	1/6 (17%)

EXEMPLAR AUDIT

3.16.1

Are we meeting Trust-wide standards for Infection Control? ▶

Chris Perry, Infection Control Nurse

This project took first prize at UBHT's 1999/2000 'Audit Oscars'

In February 2000, The National Audit Office estimated¹ that across England the problem of hospital acquired infection (HAI) affects 100,000 patients including some 5,000 deaths, at a cost to the NHS of £1bn. Their estimate that 9% of patients on wards or in surgery suffer from HAI is similar to a 1997 Public Health Laboratory Service estimate², which puts the incidence of HAIs at 2.7 per 100 patient episodes. As at best in an average trust, the personal cost to our patients and financial cost to UBHT of HAI is immense. The National Audit Office estimate that by good infection control measures, a reduction of 15% in HAIs can be achieved.

Pro-active infection control audit programmes have been demonstrated to be a practical method of monitoring standards and influencing change³. A UBHT-wide audit of all clinical areas was undertaken to provide an overview of current infection control practice and to inform the Infection Control Team's annual programme of activity. In this summary we present the standard statements, together with overall results from that audit, together with further data from neonatal intensive care at St Michaels Hospital, where a re-audit has been completed demonstrating improvements to practice.

Evidence-based references:

1. National Audit Office (2000). "The Management and Control of Hospital Acquired Infection in Acute NHS Trusts in England." HC 230, HMSO, London.
2. Glynn et al (1997). "Hospital Acquired Infection: Surveillance Policies and Practice." Public Health Laboratory Service, London.
3. Millward et al. (1993). "A clinical infection control audit programme: evaluation of an audit tool used by infection control nurses to monitor standards and assess effective staff training." *J Hosp Infect*, 24(3), 219-32.

UBHT Clinical Audit Report 1999/2000

Professions/staff groups involved:

1. Nursing - particularly the infection control link nurses
2. Medical
3. Clinical Health Professionals
4. Support Services

Aim:

1. To assess general infection control practice in order to identify educational needs and develop further targeted audit activity
2. To reduce the risk of HAI to patients within UBHT

Objectives:

1. To determine whether general infection control standards are being achieved
2. To identify clinical areas on which to focus education initiatives
3. To identify where environmental factors affect infection control practice in order to recommend change
4. To identify priorities/areas for more in-depth targeted audits
5. To re-audit clinical areas to monitor implementation of changes

Standards:

The following broad standard statements were developed from nationally recognised infection control audit programmes³, together with pragmatically derived achievement targets for 1999.

1. The ward environment will be maintained appropriately to negate the risk of cross infection (70% compliance set as target)
2. Waste is disposed of safely without risk of contamination or injury (90% compliance set as target)
3. Linen is handled appropriately to prevent cross infection (90% compliance set as target)
4. Sharps will be handled safely to negate the risk of sharps injury (100% compliance set as target)
5. Equipment will be cleaned/decontaminated appropriately and stored correctly to negate the risk of infection (90% compliance set as target)
6. Disinfectants are available and are used correctly to prevent cross infection (90% compliance set as target)
7. Hands will be washed correctly using a cleansing agent at the facilities available to reduce the risk of cross infection (90% compliance set as target)
8. Clinical practice will reflect infection control guidelines and reduce the risk of cross infection to patients whilst providing appropriate protection to staff (90% compliance set as target)

Within each broad standard statement, there were a number of individual standards assessed, which are detailed in the full audit report, which is available upon request.

Trust-Wide Results:

Std	Section	Target	Compliance
1.	Environment	70%	54%
2.	Waste	90%	56%
3.	Linen	90%	64%
4.	Sharps	100%	67%
5.	Equipment	90%	62%
6.	Disinfectants	90%	86%
7.	Hand-washing	90%	58%
8.	Clinical practices	90%	75%

Trust-Wide Recommendations / changes in practice:

1. An urgent review of cleaning contracts and specifications in all areas of the Trust
2. The provision of appropriate cleaning materials for decontamination of patient equipment
3. All Trust staff to be made aware of their responsibilities in providing a safe environment for patients, visitors and staff
4. The provision of appropriate hand washing facilities in all areas
5. A rationalisation of hand decontamination products to ensure all areas are provided with liquid soap
6. The implementation of an education programme for all Trust staff

Trust wide audits of this type have enabled the Infection Control Team to identify areas of concern on which to target limited resources. Ward/Department Managers have been provided with evidence to support purchase of additional equipment, e.g. commodes. An education programme is currently being developed, initially to target Health Care Assistants before progressing to all staff. The importance of infection control in clinical practice has been highlighted. The specific experience from NICU is that infection control practice can be significantly improved, with the support of local managers, the encouragement of local Control of Infection Link Nurses, and of course the commitment of all staff to improve practice. It has not yet been possible to demonstrate an absolute reduction in infection rates, as there are current difficulties in the quality and completeness of local HAI data collection. However **this audit has demonstrated an improvement in infection control practice and by doing so, infection risk is also reduced.**

OTHER PROJECTS

Chemical Pathology

3.16.2

What lessons have been learned from external quality assurance schemes? »

Ann Bowron, QC Officer & Ken Jones Laboratory Manager

The analysis of unknown samples provided by external quality assurance schemes is both an important measure of analytical quality and an accreditation standard. A scheme needs to be in place to monitor returns and take action if poor performance is noted. QA schemes involve Biomedical Scientists, Clinical Scientists and Consultant Chemical Pathologists. A number of deficiencies in performance have been identified in the past year. These have been reviewed at the audit meeting and action agreed to correct any problems. Action points are then followed up until the problem is resolved. A new QC database has been established to monitor trends.

3.16.3

Bile acid and liver function tests in patients with obstetric cholestasis ■

Dr Paul Thomas, Clinical Scientist

Obstetric cholestasis is increasingly recognised as a cause of foetal distress, still birth and premature delivery. Bile acids are the most sensitive marker of this disorder although liver function tests also have a role. Numbers of bile acid tests have increased substantially and this audit aims to look at its role in obstetrics. The use of bile acid tests was compared with standard liver function tests in order to assess whether positive bile acids influenced delivery. The audit involved Clinical Scientists, Biomedical Scientists and Consultant Chemical Pathologists. Results showed that bile acids were raised in 30/152 pregnancies. Bilirubin, alkaline phosphatase and AST were higher in pregnancies with raised bile acids. Patients with raised bile acids delivered earlier than controls. This audit confirmed a role for the use of routine liver function tests in monitoring effected pregnancies but not in diagnosis, where bile acid tests should be used.

3.16.4

Does laboratory investigation of Alpha-1-antitrypsin deficiency comply with protein reference unit standards? ■

June Morgan, Biomedical Scientist

Deficiencies in alpha-1-antitrypsin (AAT) may be associated with either chronic obstructive airways disease and emphysema or liver disease. This requires quantification of AAT and phenotyping. The aim of this audit was to examine procedures for the measurement and phenotyping of AAT. Specific objectives were to a) determine the numbers of tests being done and the reasons why phenotyping was requested, b) compare these with good practice as determined by the protein reference unit and c) examine the clinical value of reflex testing. In 1998/99 409 AAT requests were received. Over a 4 year period, 73 requests, (8% of workload) were generated as a result of abnormal electrophoresis. This generated 2 intermediate phenotypes, 21 MZ and one ZZ. Not all these results appeared in the notes. An outcome of this audit was the development of a more defined protocol for reporting reflex

testing and improved communication of abnormal result in situations where the test was not originally requested.

3.16.5

Laboratory external quality assurance of ward based blood glucose meters ■

David Bell, Biomedical Scientist

Laboratory-based external quality assurance of ward based blood glucose meters is part of the mechanisms that should ensure reliable results. The aim of this audit was to review the working of the ward based blood glucose quality assurance scheme and identify any changes required to improve its operation. Results showed deficiencies in the way results were classified as acceptable or unacceptable. There was also no mechanism for ensuring that sites with meters took part in the scheme. As a consequence of the audit, the statistical basis for the analysis of performance was changed. A simplified report is now issued and a mechanism for the follow-up of sites that do not return results was established.

3.16.6

On going monitoring of incidents involving substandard laboratory performance »

Ken Jones, Laboratory Manager

It is well recognised that in all laboratories a small proportion of all analytical results are errors. As part of a quality assurance programme, identification and investigation of these errors can lead to quality improvements. This system involves Biomedical Scientists, Clinical Scientists and Consultant Chemical Pathologists. During 1999/2000, review of errors at audit meetings resulted in the identification of 40 major incidents and 85 minor ones. Changes have subsequently been made to laboratory systems and practices depending on the cause of the problem. For example, following an incident when a sample was left in a transit box over the weekend a protocol was introduced whereby opened boxes are signed and placed in a specific area so avoiding confusion over who has dealt with the matter. This risk management audit provides a mechanism to identify issues that need to be taken to the Clinical Governance Committee.

3.16.7

Laboratory aspects of the measurement of anti-cardiolipin antibodies ■

Ann Bowron, Clinical Scientist

Increased anticardiolipin antibodies are most specifically associated with the anti-phospholipid syndrome a cause of thrombosis and or recurrent miscarriage. They are measured in Chemical Pathology whilst thrombophilia screens are carried out in Haematology. The aim of this audit was to improve the work flow between the Haematology Department and the Chemical Pathology Department to aid the diagnosis of the causes of recurrent thrombotic events. Also to provide a more integrated set of investigations to users of the laboratory. Over a 4 month period, 57/130 anti-cardiolipin requests were generated by the Haematology Department. Of these 36 subsequently did not have a thrombophilia screen. In these cases the anti-cardiolipin was not required. Subsequent to the audit, anti-cardiolipin is only to be measured when the thrombophilia screen is carried out. All results are to be reported to the Consultant Haematologist to integrate into the thrombophilia screen. The benefit of this project has been a reduced number of unnecessary anti-cardiolipin assays and improved workflow plus a more integrated results service to users.

3.16.8

How compliant are laboratory staff with sample checking procedures? ●

James Osborne, Clinical Audit Facilitator

Positive sample identification is critical in avoiding transcription errors. Sample checking is an easy way of confirming that work ordered on a sample is assigned to the correct patient. The aim of this audit was to examine compliance with sample checking procedures across the whole laboratory. The standard for this audit was that 95% of all samples should go through a checking procedure. Results indicated that 96% of samples were checked (previously 94%) and that on-call checking had increased from 82% to 97%. Checking in the automation section remained good (99%) while non-automation sections remained low 82%. Reasons for this were investigated.

3.16.9

Contamination of Chemical Pathology samples by K-EDTA from Haematology full blood count tubes ■

Dr Graham Bayly, Consultant Chemical Pathologist

Contamination of Chemical Pathology samples with K-EDTA can give rise to falsely high potassium results and low calcium results. This could result in inappropriate treatment. The aim of this project was to reduce the frequency of contamination of blood samples with K-EDTA and ensure that the laboratory does not report inaccurate results. Specific objectives of the audit were to a) investigate the frequency of contamination of samples and if these come from a specific location and b) identify if these are recognised in the laboratory and what action is taken. The standard for this audit was that all samples should be collected under appropriate conditions. Results showed that contamination most commonly occurs on BCH ITU whilst on average approximately 3% of samples for calcium and potassium could be contaminated due to errors in procedures in blood collection. These findings were brought to the attention of BCH ITU with a request to improve procedures for blood collection. A protocol has been introduced for suppressing inaccurate results in the laboratory.

Histopathology

3.16.10

Has the continued use of a proforma system of reporting led to improvements in the standard of reporting of breast cancer? ●

Dr Justin Weir, Demonstrator

The use of proformas is becoming increasingly common and relevant in the reporting of carcinomas. This audit re-evaluated the standard of breast cancer reporting, using the NHS Breast Screening Programme proforma. The initial audit had shown an overall 60% improvement in the standard of reporting. 50 consecutive cases (June-October 1999) were retrospectively reviewed and the overall standard in reporting was found to have further improved to 85%. Key areas were identified in the use of the proforma, which require further clarification.

3.16.11

How many histological sections are required to make a histological diagnosis of graft-versus-host disease on skin and rectal biopsies? ■

Dr Helen Porter, Consultant Lecturer in Paediatric Pathology

The current local practice is to examine 10 slides of serial sections of skin and rectal biopsies taken for suspected graft-versus-host disease (GVHD). This is time consuming (both medical and technical), and the aim of this audit was therefore to see if a confident diagnosis could be made on fewer sections from the tissue. There are no national guidelines as to the number of sections required for an adequate diagnosis. For the audit period, the consultant paediatric pathologists concurrently documented all their diagnoses after looking at 2, 6 and finally all 10 slides of these biopsies. Retrospective analysis led to an assessment of diagnostic performance from using 2, 6 or 10 slides, through the calculation of the sensitivity and the specificity of the diagnostic test. Whilst it was found that GVHD can sometimes be diagnosed on as few as 2 slides, there were a number of cases where information gleaned from all 10 slides was sometimes required for an accurate diagnosis. At the peer-group meeting it was decided that the existing 10-slide practice should not be changed, despite the potential savings that could have been made.

3.16.12

Does the breast cytology service match national guidelines? ●

Mr Mark Orrell, Senior MLSO

The local cytology department breast service was compared with standards set by the NHS Breast Screening Programme. Results were compared with the previous year. Specifically, local performance was examined with regards to a) diagnostic specificity & sensitivity, b) false positive rate, c) false negative rate and d) inadequate sample rate. Areas of improvement and satisfaction were noted. Areas where standards had not been met, or where performance had dropped in comparison to previous year, were further analysed. Causes of shortfall were proposed and countermeasures suggested. Policy changes implemented include:

- Any C3/C4 diagnosed in clinic will be rescreened by a different consultant before despatch.
- Greater care in relating clinical information (or lack of it) to cytological impression

3.16.13

Is the clinical information supplied on a request form accompanying breast-related tissue adequate for the needs of histological examination? ■

Dr Richard Daly, Specialist Registrar

The production of an accurate, informative and timely pathology report requires sufficient clinical information to be supplied with the submitted specimen. It had been noted that the laboratory was receiving some breast related specimens with clinical information which was not as detailed as it should/could have been. The purpose of the audit was to determine the proportion of request forms that were inadequate and to highlight any specific problem areas that were likely to give rise to such a form. There are no local or national published guidelines as to what constitutes adequate clinical information for this purpose. A junior pathologist with experience of breast histology made a subjective assessment of adequacy, assigning forms into one of four categories: Perfect, Satisfactory, Borderline (5% of forms fell into this category) and Inadequate (10% of forms fell into this category). The major problems identified were a) those forms with NO clinical information written down and b) those forms not specifying the nature of a mammographic abnormality. A list of details which pathologists would like to know has subsequently been drawn up and appropriately circulated.

PROBLEMS ENCOUNTERED & LESSONS LEARNED

“Pathology recognises that it exists more as a grouping of quasi-independent laboratories than as a single cohesive directorate. This affects the audit conducted, with many topics small and discrete, often focusing in on a particular diagnostic test. A better term to describe this might be *laboratory* audit. Trying to get clinicians from other directorates interested in our audits can be difficult, but when it happens is found to be beneficial to both sides.

One area of collaborative success has been cancer audit, where Histopathologists have a wide programme of clinicopathological meetings, and are regularly contributing to audit in the surgical directorates. A challenge over the next few years is to ensure that the same degree of collaboration exists in cardiovascular disease audit.

The Trust's investment in the Infection Control Team has shown a promising early return, and Pathology takes pride from their recognised achievements. However, the size of task facing them and their colleagues in the wards and clinics across the Trust should not be underestimated.”

The following project summaries were received too late to enable their inclusion in the statistical data at the beginning of the chapter:

Microbiology

3.16.14

Continuous monitoring of laboratory turnaround ▶

Mr Dave Cook, Chief MLSO

Bacteriology (based within Pathology at the BRI but provided as part of the Public Health Laboratory Service) has continuously monitored its turnaround since 1995. Standards are as follows:

- Technical work to be completed by 12:00 (target of 90% compliance)
- Results authorised by 14:00 (target of 90% compliance)
- Results authorised by 20:00 (target of 100% compliance)

Performance is reviewed weekly, with the performance of individual sections of the laboratory displayed prominently within the department. Any significant deviation from compliance is thoroughly investigated, with open discussions with staff leading to remedial action.

3.16.15

AVON-WIDE AUDIT

Laboratory requests for microbiology post needlestick injury – a pan-Avon view ■ ▶

Dr David Carrington, Consultant Virologist

Needlestick injury (NSI) is a high priority clinical risk issue for NHS staff, who understandably wish to avoid exposing themselves to Hepatitis, HIV, and other blood-borne infectious agents. However, when a NSI occurs, it is essential that all relevant information be collected to enable the PHLs to perform the most appropriate laboratory tests. Bristol PHL perceived a variation in practice across Avon, with the different Occupation Health Departments of NHS Trusts requesting different tests, and that all relevant information was not always passed on. An extensive retrospective audit of NSI-associated requests to Bristol PHL is therefore being undertaken. The audit is now at the data analysis stage, and a full report is expected later this year. Preliminary results have confirmed inadequate practice in the supply of clinical information, particularly in the clear identification of and cross-referencing between the donor and recipient blood samples. The audit uncovered an unexpected issue. Blood samples sent 'for storage' from NSI incidents were inadvertently going to Chemical Pathology rather than Bristol PHL storage freezers. All NSI samples are now directed to Bristol PHL.

Haematology

3.16.16

Is UBHT following the BSH Guidelines for Thrombophilia Testing? ■

Dr Sophie Otten, SpR

Regular media 'scares' about the risk of thrombosis with the female contraceptive pill leads to surges in demand for thrombophilia screening. A full thrombophilia screen is expensive and should not be undertaken without adequate indication. An audit was therefore undertaken to establish whether best practice is being followed in the laboratory investigation of a thrombophilia screen, specifically:

- To assess adherence to guidelines by the requesting clinician
- To assess adherence to guidelines by the approving haematologist
- To review thrombophilia screen results
- To determine whether changes to process are required, in response to new research and increasing clinical pressures

Results showed that 90% of thrombophilia requests complied with 1990 British Society of Haematology guidelines. The following recommendations were made:

- Improve communication with GPs and hospital doctors, and to disseminate guidelines – possibly via GP news
- Closer liaison with Chemical pathology to avoid duplication of tests
- All patients suspected of having a thrombophilic abnormality should be referred to a specialist clinic for advice and management

New guidelines are expected in 2000, after which a re-audit will be undertaken.

Directorate-Wide

3.16.17

Are Pathology & Radiology reports getting filed in patient clinical notes?

James Osborne & Sally King

Together, Pathology and Radiology generate 1.5 million paper reports per annum, of which about 1 million are destined for UBHT patient clinical notes. In the 1998 CNST Audit of the quality of patient notes, only 42% of notes had a full set of laboratory and x-ray reports filed. For the 1999 Audit (see paragraph 3.4.1), an offshoot audit was developed to further investigate this particular issue. The specific aims of the project were:

- To determine if pathology and radiology reports are getting back to the notes
- To review the significance of the CNST standard, in the light of the growing reliance of electronic access to laboratory and x-ray results. I.e. does it matter if laboratory and x-ray reports are not getting back to the notes?

Key results:

- 65/148 (44%) patient clinical notes had a complete set of reports, i.e. CNST standard compliance of 44%, compared to 42% for 1998.
- 884/1175 reports (75%) were found in patient clinical notes.
- There was variation in compliance, based upon the type of report & and clinical speciality involved, i.e. 80% Haematology, 78% Blood Transfusion, 78% Chemical Pathology, 72% Microbiology, 64% Histopathology, 50% Radiology
- A separate issue that was highlighted by this audit was that not all x-ray investigations produce a paper report. In 1999, 28% of inpatient x-rays were unreported by Radiology.

UBHT Clinical Audit Report 1999/2000

- There was variation in the proportion of results accessed electronically from VDUs on wards. For example, 65% of Chemical Pathology results are accessed electronically on the day of analysis, whilst the proportion of Histopathology results accessed is only 26% after 2 weeks.
- In an on-line questionnaire, 32/66 (46%) of doctors agreed with the statement that 'paper reports should always be produced' following laboratory investigations. 23% were prepared to drop the paper report entirely, and rely on computer access to results. 31% thought that there was a continuing role for the paper report when the result was particularly diagnostic or unexpectedly abnormal, or when specifically a paper report was asked for.

At a well-attended joint audit meeting, concerns were voiced that the growing trend towards greater reliance on electronic access to results could lead to adverse patient outcomes. The paper report remains an important backstop to ensure that important results are not missed. There was agreement that the issues raised by this audit should be formally addressed by the Trust's Clinical Risk Management Committee.

RADIOLOGY

SUMMARY

Number of 1998/9 roll-overs ◀	5*
Number of new audits ■	12
Number of re-audits ●	1
Number of ongoing monitoring projects ▶	0
Total number of audits	15
Number of current (i.e. uncompleted) audits ▶	4

* 3 of these projects appear in Appendix C

	1998/9	1999/2000
Multidisciplinary audits	13/16 (81%)	10/13 (77%)
Interface audits	2/6 (13%)	1/13 (8%)
Audits measuring against or resulting in development of standards or guidelines	15/16 (94%)	12/13 (92%)
Audits involving standards or guidelines which have been/will be developed following consideration of available evidence about clinical effectiveness	8/16 (50%)	8/12 (67%)
Audits examining a Cost Effectiveness issue	-	7/13 (54%)
Audits examining a Risk Management issue	-	6/13 (46%)
Audits which directly involved patients <i>(percentages above do not include 1998/9 roll-overs)</i>	3/16 (19%)	0/13 (0%)
Audits resulting in changes in practice <i>(percentages above include 1998/9 roll-overs, but not 1999/2000 'current' projects)</i>	13/17 (76%)	7/12 (58%)
Resulting in measurable benefits for patients <i>(percentages above include completed re-audits and ongoing projects only)</i>	8/11 (73%)	0/1 (0%)

EXEMPLAR AUDITS

3.17.1

How effective is mitral valve balloon commissurotomy at the BRI? ■

Dr Peter Wilde (Dragos Dragnea, Dr Stephen Evans, Rose Connaughton)

This project was shortlisted for UBHT's 1999/2000 'Audit Oscars'

Mitral valve balloon commissurotomy (MVBC) is performed on symptomatic patients who have rheumatic mitral stenosis. This procedure is an alternative to surgery and in appropriately selected patients is considered the treatment of choice. In this condition there is fibrosis and constriction of the valve. MVBC involves dilatation of the valve to improve its functionality. MVBC is a major procedure with a potential for complications which has been done in small numbers over many years. This project highlights the importance of auditing small volume complex procedures over a long period of time.

Data was collected on patients seen at the BRI from 1990 to 1998. During this period, 106 procedures (104 patients) were carried out. Patients were identified from the x-ray system and data gathered from the range of sources including clinical notes, echo video tapes and cardiology summary files. A questionnaire was also sent to GPs.

Results showed a high degree of correlation between BRI practice/outcome and published material on this procedure. Success was based on a number of clinical evaluations including measured parameters, symptoms and complications. No changes in clinical practice were clearly indicated from the audit. It was however considered that increased availability of echocardiography would be advantageous. In addition some of the difficulties in retrieving results over a long period of follow-up have instituted change in practice for data collection.

3.17.2

How accurately do Radiographers perform and report testicular ultrasound? ■

Mr Martin Nelson, Snr Radiographer (Dr V.Markos, Dr J.Kabala, Dr M.Callaway)

Testicular ultrasound is a non-invasive, effective tool for determining intra from extra testicular pathology and cystic from solid lesions. Given that there is a shortage of Radiologists and the fact that the number of ultrasound scans of all types including testicular, is growing rapidly, one possible option is to allow appropriately trained and qualified Radiographers to perform this task. A study was therefore undertaken to assess the accuracy with which Radiographers perform and report testicular ultrasound. 306 patients were examined, with 83% of reports showing good concordance between Radiologists and Radiographers. 91.5% of primary diagnoses remained unchanged between the initial and final report issued by the Radiologist. No patients recalled for re-scanning due to pathology not being clearly demonstrated. One concern, however, was that there was no method of assessing whether the Radiographer could differentiate between reports which would remain unaltered and those requiring Consultant Radiologist review. A further study to assess this is therefore being organised.

OTHER PROJECTS

3.17.3

How many appointments are cancelled, why, by whom and for which examinations? ■

Sally King, Supt. Radiographer

Cancellations are generally made at short notice, and it is often not possible to fill the vacant slot. This is both costly and causes distress to patients. The standard for this small pre-audit was taken from the Patient's Charter. Results showed that whilst the Charter standard was adhered to, over 50% of Inpatient cancellations were made by the referring doctor on the day of the examination, primarily because they were not needed. 80% of Outpatient cancellations were by the patient, either because a) they didn't want the examination, b) they didn't need it or c) it had already been done elsewhere. 30% of OPs gave more than 5 days notice. The audit highlighted the fact that patients are not always aware of what type of examination they are being referred for until they receive their appointment letter with the relevant information. It also questions whether all IP examinations requested are really appropriate. Further work needs to be done in this area in conjunction with addressing high DNA rates for certain examinations.

3.17.4

Why are we receiving enquiries from GPs about examination results? Are we meeting our 10 day standard? ■

Mrs Sally King (Supt. Radiographer) & Mr Simon Rudman

Concern was expressed about the number of enquiries received from GPs for results on examinations performed on their patients (7 per day on average). 15% of enquiries related to examinations, which were Consultant referrals. The time between examination and enquiry appeared to vary. 31% of enquiries were at least 3 days after dispatch of the report. Whilst some practices should be able to look up results via the computer links, it appears that this facility is not always satisfactory. Dealing with enquiries is a very time consuming process and impinges on other staff duties. The Patients Charter Standard that GPs should receive a report within 10 days of the examination is being achieved for a majority of cases. Improved reporting time for certain areas would help reduce the number of enquiries, but greater increase in efficiency would be achieved through Electronic Results Reporting and GPs being able to view results on their patients from Consultant referred examinations (where appropriate). If all this was put into place a 60% reduction in enquiries could be made; this who allow improved efficiencies in other duties for this area.

3.17.5

Are fetal anomalies being correctly diagnosed by echocardiogram? ■

Mrs Mandy Freer, Superintendent Radiographer, St Michael's Hospital

Within the Ultrasound Unit, all detailed fetal echocardiograms are performed by trained staff to a specific protocol and reports are recorded on a dedicated computer database. Follow up is obtained on all cases for at least 8 months post natally to confirm that the diagnosis from the scan was correct. There is morbidity and mortality associated with congenital heart

defects diagnosed in utero and this investigation helps to plan postnatal requirements. The audit identified 247 scans on 207 patients over a period of one year. Referrals were from St Michael's Hospital (64), others hospital (108), F.M.U. (22) and GPs/Midwives (13). Reasons for referrals were Family History of CHD (127), Maternal indication i.e. Diabetes (27), ?Cardiac anomaly on routine scan (20), arrhythmia (13) and other anomaly (20). The correlation between the fetal echo and postnatal findings was very high (99.7%). Due to increasing input of Paediatric Cardiologists and Fetal Medicine Unit there is a need to set up a system to ensure that standards are maintained and that a common database is used. Following discussions it has been agreed that all UBHT staff performing this investigation should follow the same departmental protocol and standards as St. Michael's Ultrasound.

3.17.6

How accurately do Radiographers perform and report routine abdominal ultrasound?

■ ▶

Dr A Leslie, Mrs H Lockyer, Dr J Virjee

There is currently a shortage of Radiologists, whilst the number of ultrasound scans of all types is growing rapidly. Similar to the testicular ultrasound study already described, this project sought to establish whether appropriately trained and qualified Radiographers could perform this role to a high standard. 100 consecutive patients attending for routine abdominal ultrasound were included in the study, each patient being scanned by both Radiographer and Radiologist. Both operators noted their findings and wrote a concluding report without conferring. Reports were then compared and where there was disagreement the patient was either re-examined by another Radiologist or had further investigation. Results indicated that experienced Radiographers and Radiologists were both highly accurate in performing and interpreting routine abdominal sonography (no statistical significance in accuracy rates). Both operators missed a small minority of cases. A change in policy is therefore being considered whereby Radiographers who find no abnormality or straight forward abnormalities such as gallstones or renal cysts will be able to issue their own reports.

3.17.7

What is the frequency of missed fractures and false positive percentage in A&E reporting? ■

Dr I Watt, Consultant Radiologist, Mrs D. Marshall Superintendent Radiographer

A departmental standard states that 'A&E examinations should be reported and typed on the first working day after the examination was conducted'. Following reporting problems, with Radiologists on leave etc., it was noticed that films were on the Suite E viewer for four days or more before being reported on. An 'on the spot' audit was therefore carried out over two reporting sessions by Dr Watt to establish the number of missed fractures i.e. those films not Red or Green Dotted, waiting for reporting (Red dot by Radiographers; Green dot by A&E if fracture seen). 250 investigations were reported, and a record kept by Dr Watt of details of missed fractures and false positives. 4% of investigations examined revealed missed fractures and false positives. These reports were referred to A&E urgently in case of patient recall. Subsequent to this audit, the number of reporting sessions has been increased.

3.17.8

Are catheter urine samples during MCUGs (Micturating Cysto-Urethrograms) necessary? ■

Dr A W Duncan, Consultant Radiologist

The practice for many years has been to obtain catheter samples during routine MCUG for bacteriology-microscopy, culture and sensitivities. The audit was carried out to see if this practice has any bearing on management. Samples were taken and copies of the reports requested. Only a few reports were received and not one of these was positive on microscopy or culture. Collecting these urine samples appears superfluous. Many investigations are done for urinary tract infections and the patients are already on antibiotics. Stopping this practice would save both Radiographer and Laboratory time in addition to the materials used for collection. Letters have subsequently been sent to the relevant Consultants in the Children's Hospital, stating that this practice would be stopped. In two areas it was identified that it would be appropriate to continue the practice on children under the age of 1 year. This practice is being reviewed throughout the coming year.

3.17.9

Does the rate of film rejects fall within standards laid down by the RCR? ■

Mrs D Marshall, Supt. Radiographer

Data was collected about the total number of films done, total number rejected and reasons. Results showed that the reject rate complies with RCR Standard. There was no single overriding reason for rejections. The nature of the patients and immobilisation techniques employed on these patients, does have an impact on reject rates, as does the throughput of Radiographers, many of whom do not work in A&E X-ray regularly 9-5. Staff rotation has subsequently been amended to allow update in techniques. A recommendation of this project is the installation of Lantomats / Digital Radiography.

3.17.10

Are samples obtained by CT guided biopsies providing adequate tissue for diagnosis? ◀

Dr R Davies, SpR

The aim of audit was to find out whether samples obtained by CT guided biopsy are providing adequate tissue for diagnosis. Retrospective data on the CT guided biopsies undertaken from December 1996 to June 1998 was collated. 44 patients underwent 46 procedures from a total of 54 recorded in the CT Log book, i.e. 10 patients notes were unobtainable. Of the 46 procedures, 10 did not record the needle size. Of the recorded 36 procedures, 31 (86%) yielded sufficient tissue to provide a Histological diagnosis. No complications within 30 days of the procedure were noted. There were a number of gaps in the collation of data due to notes, results, etc. being unobtainable. Improved data recording is required and a proforma will be developed to ensure data quality and completeness of information. This information will also be then entered onto a specified database. Standards are to be agreed and a further study will be undertaken when the new systems are in place.

3.17.11

How appropriate are requests for erect abdomen radiographs in paediatric radiology? ◀ ▶

Dr A W Duncan, Consultant Radiologist

The impression amongst the radiologists is that positive findings of investigations for abdominal pain ordered amongst clinicians within Children's Services is low. A previous retrospective study several years ago found only 23% of referrals were positive. Servicing the requests for investigations represents a large resource implication to the department and an opportunity cost the other clinical commitments. This audit will attempt to ascertain whether investigations for abdominal pain affect the management of patients in terms of outcome – specifically the positive rate of referrals for abdominal pain to Radiology and whether negative referrals are appropriate. The project also seeks to understand the impact on parents and children with negative results. The standard for the audit is that all patients referred for abdominal US/X-ray should have a positive finding (target 100%; exceptions – specific diagnoses on the referral card i.e. UTI, abdominal mass). A literature search has been undertaken. Data will be collected prospectively over a 3 month period. A questionnaire has been designed and will be assessed by a pilot study. Referring consultants will then be given the questionnaire to complete and answers will then be correlated with referral cards in Radiology for analysis. Contemporaneously the parents will be surveyed by way of a questionnaire posted to their home address. Once the pilot has been conducted and any alterations to the planned methodology have been adjusted it is intended to collect data for the 3 month period to include a minimum of 100 patients.

3.17.12

Assessment of liver biopsies, complications and outcomes ■ ▶

Dr M Callaway, Consultant Radiologist

Liver biopsies carry a relatively high probability of complications if the most appropriate methods are not utilised. Complications can lead to a great deal of suffering by the patient, as well as huge expenses to the Trust. Data was therefore gathered on all liver biopsies, reviewing the type guidance under which biopsy conducted i.e. U/S, CT, M.R.I., Transjugular, Plugged etc. Number of passes against each modality were recorded as was needle gauge (i.e. size), outcome and any complications. To date 90 cases have been collated. Practice appears to be of a high standard, with just one patient sustaining complications (taken to theatre for bleeding). Standards are to be set regarding the approach, imaging modality and needle gauge for particular indications. It has been suggested that this study be combined

with another which has been undertaken and will provide more extensive data including strike rates. Also it would be valuable to demonstrate the comparison between liver biopsies performed blind and those under guidance of an appropriate imaging modality.

3.17.13

What is the accuracy of detection of Isolated Talipes ('Club Foot') at antenatal follow up? ■ ▶

Helen Lockyer (Senior Radiographer) & Dr P Davison

Records of antenatally diagnosed Talipes have been kept since 1991. By retrieving data from mothers/babies notes postnatally, the accuracy of detection of talipes can be determined.

3.17.14

Are requests for Skull Radiography from A&E following RCR Guidelines? ●

Dr Sara Williams (SpR Radiology) & Mrs Dee Marshall (Supt. Radiographer)

The aim of this audit was to examine the use of skull radiography in the trauma setting and assess the quality of clinical information provided on the request form. Requests for skull radiography were collected over a 2 month period. All patients were aged 14yrs or over and had a history of head trauma. Clinical information was assessed to see if it complied with the clinical indications given in the RCR Guidelines (1998). A significant proportion of requests for skull radiography, in the context of trauma, did not appear to follow the guidelines, however, it is difficult to evaluate whether the information available to the Radiology department was representative of the true clinical situation as the audit was dependent on the written information provided on the request card. Where no site of injury was given, there was a high correlation with a lack of indication for skull radiography. 3 patients had skull fracture. Results were similar to those from a previous study. Clinicians need to be reminded of current RCR Guidelines. Future audits in this area should also review clinical notes to assess the correlation between severity of soft tissue injury and referral for SXR and whether further indications are recorded in the notes.

3.17.15

What effect does additional copper filtration have on paediatric dose rates and image quality? ■

E M Pitcher & F Swanborough

It is a requirement to monitor patient radiation doses against national standards and review image quality. Very little data is available with regard to paediatric doses. Data is being collated by the NRPB, to which this study has contributed. Collecting paediatric data is more complex than for adults due to the range of ages and sizes involved. Various equipment settings were assessed to ensure optimum use of the equipment. Additional copper filtration was found to significantly reduce entrance skin dose. Deterioration in image quality was clinically acceptable for 0.1mmCu. Subsequent to this audit, the addition of 0.1mm Cu is now standard practice with a benefit of dose reduction to both patients and staff. Further work is being undertaken to investigation of the effect of copper on Effective Dose. The study is also being extended to look at projections used for GI examinations.

PROBLEMS ENCOUNTERED & LESSONS LEARNED

"Problems have been experienced in obtaining proposal forms, making it difficult to keep tabs on what studies are going on. This can lead to accidental duplication of effort on same/similar projects. It is hoped to instigate a more structured approach for the year ahead".

ALSO SEE...

Obstetrics & Gynaecology - "Are cases of cleft lip and palate being detected antenatally?" (3.12.9)

Pathology - "Are Pathology & Radiology reports getting filed in patient clinical notes?" (3.16.17)

SPECIALTY SERVICES

SUMMARY

Number of 1998/9 roll-overs ◀	2*
Number of new audits ■	4
Number of re-audits ●	3
Number of ongoing monitoring projects ▶	3
Total number of audits	10
Number of current (i.e. uncompleted) audits ▶	3

* These projects appear in Appendix C

	1998/9	1999/2000
Multidisciplinary audits	4/6 (67%)	3/10 (30%)
Interface audits	0/6 (-%)	2/10 (20%)
Audits measuring against or resulting in development of standards or guidelines	3/6 (50%)	7/10 (70%)
Audits involving standards or guidelines which have been/will be developed following consideration of available evidence about clinical effectiveness	1/6 (17%)	2/7 (29%)
Audits examining a Cost Effectiveness issue	-	5/10 (50%)
Audits examining a Risk Management issue	-	6/10 (60%)
Audits which directly involved patients <i>(percentages above do <u>not</u> include 1998/9 roll-overs)</i>	1/6 (17%)	2/10 (20%)
Audits resulting in changes in practice <i>(percentages above include 1998/9 roll-overs, but not 1999/2000 'current' projects)</i>	1/6 (17%)	5/7 (71%)
Resulting in measurable benefits for patients <i>(percentages above include completed re-audits and ongoing projects only)</i>	0/3 (-%)	1/4 (25%)

Pharmacy**3.18.1****Is the Antibiotic Policy followed at Bristol General Hospital? ■***Hippolyte Fraser*

Problems relating to antibiotic prescribing have been identified at BGH. In particular, incomplete/unclear chart endorsement has resulted in the inappropriate treatment of patients. This audit was initiated to ascertain whether the hospital antibiotic policy was being followed. Following the audit, prescribing practice improved among SHOs and Consultants resulting in measurable benefits to patients.

3.18.2**Are patients satisfied with the service they receive from Hightech Homecare? ▶***Colleen Abbot*

UBHT provides Hightech Homecare services to patients throughout Avon, fulfilling a contract for Avon health. The service incorporates pharmacy, nursing, and MEMO input. Avon Health require an annual audit report including patient satisfaction, incidents, financial balance, and level of service. Service developments resulting from the audit are implemented.

3.18.3**Is Teicoplanin being prescribed where Vancomycin would be satisfactory? ■***David Harris*

Vancomycin is the gold standard treatment of MRSA (Methicillin Resistant Staphylococcus aureus) within the Trust. An audit was initiated at the beginning of the year to determine whether teicoplanin (2nd-line treatment) was being prescribed within the hospital. The full report will be available in Spring 2000.

3.18.4

Are the antibiotics used on the BMT Unit efficacious? ●

Clare Kelly

This ongoing audit monitors compliance with the antibiotic protocol in order to identify any changes in efficacy and practice. The results from last year's audit demonstrated a dramatic increase in positive microbial cultures, which were treated effectively with antibiotics that adhered for the most with the current guidelines.

3.18.5

How long does it take the BCH Pharmacy Department to dispense TTAs and what is the error rate detected in the prescribing? ■

Clare Kelly, Pharmacist

Pharmacy encounters prescribing errors on a continual basis, resulting in a delay in the dispensing of discharge prescription. This project was prompted by a request from Ward 34 (Day Case Surgery) to hold prepacks of medication at ward level to take away. An audit was undertaken to establish the number of pharmacy interventions made on discharge medication at BCH, and the knock-on effect this has on time to dispense. In 90% of TTAs there was an intervention rate of 10%, whilst 92% of TTAs were completed within three hours. Pharmacy were of the opinion that the timescale for the audit had been too short and that results were therefore unrepresentative. Drugs will continue to be dispensed in Pharmacy.

3.18.6

Is Granisetron being appropriately prescribed In Paediatric Oncology? ● ▶

Clare Kelly

The use of granisetron in paediatric oncology has recently increased. An audit had previously been undertaken to establish whether local anti-emetic protocols were being adhered to, and one case of over-prescribing in adolescent patients was identified. This topic is currently being re-audited.

3.18.7

Is the prescribing of the initial drug chart on the BMT Unit carried out effectively with minimal errors? ■ ▶

Clare Kelly

The initial BMT patient drug charts are complex and a major source of errors. This audit will examine chart prescribing, and the production of additional forms containing patient and protocol details. Prescribing errors, together with the timeliness in producing the additional forms, and thorough consultant checking procedures, are currently being audited. It is hoped that guidelines will be produced to facilitate correct completion of charts resulting in improved practice.

3.18.8

Is the antibiotic policy effective in Paediatric Oncology? ● ▶

Clare Kelly

It is perceived that first-line antibiotic effectiveness in febrile neutropenics is declining. The aim of this audit is to establish the effectiveness of antibiotics. The results of the audit will be compared with previous audits to identify any changes, which need to be implemented.

3.18.9

What is the current level of dispensing errors? »

Sandra Gray, Pharmacy Manager

Levels of dispensing errors in all UBHT Pharmacy Departments are continuously monitored and benchmarked against national data.

Medical Illustration

3.18.10

Are digital photographs adequate for medical reports? »

Miss E Hurst

This continuous audit process has led to the production of a new clinical request form and an increased awareness of clinicians' needs.

PROBLEMS ENCOUNTERED & LESSONS LEARNED

MEMO / Medical Physics / Medical Illustration

"There are still problems with motivating staff to understand the relevance and need for audit in the non-clinical areas of the directorate. However, a promising start has been made this year with a number of new projects being submitted for the Forward Programme. There has been increased interest in audit, though further effort is required in order to encourage further proposals."

ALSO SEE...

Medicine – "Is the directorate's antibiotic prescribing policy being followed?" (3.11.2); "How effective is the Home Enteral Feeding Programme?" (3.11.9)

SURGERY

SUMMARY

Number of 1998/9 roll-overs ◀	12*
Number of new audits ■	15
Number of re-audits ●	1
Number of ongoing monitoring projects ▶	3
Total number of audits	26
Number of current (i.e. uncompleted) audits ▶	14

* 2 projects were transferred to Critical Care. 2 projects appear in Appendix C.

	1998/9	1999/2000
Multidisciplinary audits	9/30 (30%)	9/19 (47%)
Interface audits	1/30 (3%)	2/19 (11%)
Audits measuring against or resulting in development of standards or guidelines	29/30 (97%)	12/19 (63%)
Audits involving standards or guidelines which have been/will be developed following consideration of available evidence about clinical effectiveness	28/30 (93%)	9/12 (75%)
Audits examining a Cost Effectiveness issue	-	1/19 (5%)
Audits examining a Risk Management issue	-	1/19 (5%)
Audits which directly involved patients <i>(percentages above do not include 1998/9 roll-overs)</i>	5/30 (17%)	3/19 (16%)
Audits resulting in changes in practice <i>(percentages above include 1998/9 roll-overs, but not 1999/2000 'current' projects)</i>	16/20 (80%)	4/12 (33%)
Resulting in measurable benefits for patients <i>(percentages above include completed re-audits and ongoing projects only)</i>	0/0 (-%)	2/4 (50%)

EXEMPLAR AUDIT

3.19.1

Reducing the rate of anastomotic stricture formation following oesophagectomy ● *Vasia Kavadas (Registrar) and Andy Hollerwood (Research Fellow)*

This project took second prize at UBHT's 1999/2000 'Audit Oscars'

General Surgery

This audit was undertaken in order to quantify the rate of anastomotic stricture formation following oesophagectomy, compare with standards and implement changes in operative management which may affect stricture formation. The benchmarks for this audit were a stricture rate 30% when the anastomosis is in the neck and a rate of 10% when the anastomosis is in the chest.

The first audit (n=62) looked at all those patients having oesophagectomies between February 1994 and December 1997 excluding patients who died within 30 days of operation, patients who were lost to follow up and patients with evidence of a malignant recurrence at the anastomosis site. The overall anastomotic stricture rate was 52%. This was above the standard of 30% and therefore the following changes were introduced: a) a single consultant surgeon to perform the neck anastomosis and b) change the method of operation to an intrathoracic anastomosis where appropriate.

The subsequent re-audit (n=61) included all those patients having oesophagectomies between January 1998 and December 1999 with the exclusion criteria the same as stage 1. The overall stricture rate was 33%. For neck anastomosis (n=47), rate = 40%. For chest (n=14), rate = 7%.

In conclusion, anastomotic stricturing following oesophagectomy can be reduced by modifying operative strategies. It is therefore now recommended that an intrathoracic anastomosis is performed where appropriate. This topic will be re-audited in two years' time.

3.19.2

What is the incidence of hypocalcaemia after total thyroidectomy? «

Dr E O Pearse, Senior House Officer.

General Surgery

An abstract from this audit has been presented at a British Association of Endocrine Meeting and published in the British Journal of Surgery (1999, 86, pp1213-1223). A new registrar has recently been appointed and will continue this project.

Hypocalcaemia after thyroidectomy is common and mostly transient but, if permanent, long-term replacement therapy is required. The importance of informing patients of rates of permanent hypoparathyroidism has recently been emphasized. This study audited hypocalcaemia after bilateral thyroid surgery.

A retrospective casenote study of patients undergoing thyroidectomy was undertaken (n=92). 70 patients underwent total thyroidectomy, of which 17 operations were for malignancy. Fifteen patients underwent operation for thyrotoxicosis. After thyroidectomy, hypocalcaemia symptoms were documented in 27 patients, of whom 20 (22%) had calcium levels below 2mmol l⁻¹ on one occasion. In 10 (11%) of patients hypocalcaemia remained below 2mmol l⁻¹ for 2 days. At 6 months after operation 8 patients (9%) had persistent hypocalcaemia. All had undergone total thyroidectomy, 4 for malignancy and 4 for symptomatic multinodular goitre. Permanent hypocalcaemia occurred significantly more frequently after operation for malignant disease (p=0.04).

In summary, this audit revealed a high rate of hypoparathyroidism, particularly after total thyroidectomy for neoplasia. Patients can be informed of these rates of permanent hypoparathyroidism during informed consent.

OTHER PROJECTS

General Surgery

3.19.3

Are patients suffering long-term pain following repair of inguinal hernia? « »

Zen Rayter, Consultant Surgeon

General Surgery

A consultant surgeon at the BRI received a letter from a local GP suggesting that some patients who have had a hernia repair are not returning to their normal day-to-day routines as quickly as expected and are suffering more than an expected amount of pain. It was therefore agreed to investigate this claim by undertaking an audit project in conjunction with Avon PCAG. Data has been collected on 100 consecutive hernia patients (mostly day cases, but including some inpatients). A senior nurse undertook the data collection from the BRI notes, and a questionnaire was sent to patients at one and three months post operatively. GPs were also asked to complete a form about consultations for pain from patients identified in our sample. Data is currently awaiting analysis.

3.19.4

Are patients having enough bed rest after transfemoral arteriograms, angioplasties and stent insertions? «

Angie Nicholson, Sister

The aim of this multi-professional audit was to standardise the amount of bed rest a patient receives after either a transfemoral arteriograms, angioplasties or stent. 91 consecutive patients were included in the audit. Data was collected retrospectively from patients' casenotes. The majority of patients (76%) had either 4 or between 4 and 6 hours bed rest. Patients on Ward 17 had significantly less bed rest than patients on Ward 9. 9% of patients

had minor post operative complications. 3% of patients had moderate/major post-operative complications. Gentle mobilisation 4 to 6 hours following TFA was not associated with any increase in complications. It was concluded that patients following TFA/angioplasty stent insertion may be mobilised within a ward environment safely 4 to 6 hours after their procedure and that a care pathway would reduce disparity in treatment between wards and would allow for further audit in this area. The audit lead has recently been seconded to develop such a care pathway.

3.19.5

Is 'Possum' scoring a good predictor of morbidity and mortality following surgery for upper GI malignancy? « »

Mr C P Barham

The Possum scoring of major Upper GI cases continues and audit findings consistently indicate a close correlation between prediction and actual morbidity/mortality. The audit has been submitted to the Association of Surgeons meeting in Cardiff in May and has been accepted for presentation. Further cases are to be reviewed on an ongoing basis.

3.19.6

What are patients' perceptions of early discharge with an axillary drain after breast cancer surgery? « »

Zen Rayter, Consultant Surgeon

An analysis of surgical morbidity is now almost complete. These results, together with patient interview results, will shortly be presented within the directorate.

3.19.7

Is the Coloproctology Rapid Access Clinic running effectively? ■ ▶

Mia Card, Colo-rectal Nurse

The aim of this current audit is to establish whether we are meeting the national two week waiting standard and whether the relevant patients are being referred to the Rapid Access Clinic. Data collection for this multi-professional audit began in March 2000.

3.19.8

Are we providing patients with an acceptable standard of oral hygiene? ■ ▶

Catherine Moore, Sister, Ward 12

An evidence-based practice group has been set up including representatives from all areas of the surgical directorate. Mouth care is the first area the group is focusing on. The objectives of this current audit are as follows:

- To ensure nurse knowledge is based on relevant evidence about best practice
- To ensure patients receive a high level of oral hygiene
- To ensure patients are made aware of the need for oral hygiene
- For all patients to be able to state that their mouth feels clean and healthy

Data is currently being collected.

3.19.9

Are outpatient clinics starting on time? ■ ▶

Ann Rollings, Head of Nursing for Outpatient Clinics.

The aim of this multi-professional audit is to find out if and why outpatient clinics are starting late. Data is currently being analysed.

3.19.10

Are GPs providing enough personal information about the patient in their referral letters? ■

Ann Rollings, Head of Nursing for Outpatient Clinics.

The aim of this project is to reduce the number of patients who do not attend their outpatient clinic appointment (if the BRI is provided with patient contact details, this enables clinics to remind or follow-up patients). A random sample of 100 referral letters were audited. Deficits were noted in the provision of information such as the patient's postcode, telephone number, NHS number or hospital number. Awareness therefore needs to be raised so that personal details are included on referral letters in order that the patient can be easily contacted if required, to reduce the number of patients not attending outpatient clinics.

3.19.11

Are the breast care nurses meeting the ASWCS standards? ■ ▶

Carla Holmes, Breast Care Nurse

The aim of this audit is to ensure that the Bristol Breast Unit is achieving standards laid down by the Avon, Somerset and Wiltshire Cancer Services: specifically that patients receive satisfactory care, information and support from breast care nurses. Data is being collected from February to April 2000 through telephone interviews conducted by an independent researcher.

3.19.12

Is there a correlation between the extent of axillary dissection being described operatively versus pathological number of lymph nodes being accrued? ■ ▶

Zoe Winters

This audit was undertaken to establish whether or not a therapeutic axillary dissection is being performed in the majority of women as opposed to a level 1 axillary sampling, and to find out if the trend varies between symptomatic, screening and mastectomy patients. The presumption is that in the majority of cases a level 1 axillary lymph node dissection is being performed, independent of tumour size. Data collection is due to begin in April 2000. The sample will consist of 50 symptomatic patients (palpable breast lump) and 50 screen-detected invasive breast cancers (Avon Screening).

3.19.13

Therapeutic adequacy of wide local excision ■ ▶

Zoe Winters

This current audit is concerned with assessing the adequacy of the microscope extent of local excision in symptomatic and screen-detected breast cancers: specifically, to determine whether adequate 1cm margins are being achieved in the definitive specimen independent of the extent of cavity shavings. When cavity shavings are taken, do they represent a 'completion' of the adequacy of dissection or are they merely sampling in the adjacent tumour field? Data collection is due to begin in April 2000. The sample will consist of 50 symptomatic patients (palpable breast lump) and 50 screen-detected invasive breast cancers (Avon Screening).

3.19.14

REGIONAL AUDIT

How are patients with breast cancer long bone metastases disease being managed? ■

Zen Rayter & Regional Cancer Organisation

This project involves doctors in general surgery and oncology. A pilot audit was carried out retrospectively looking through case notes. A large amount of information about symptoms, diagnosis, treatment and outcomes of patients could not be found. The full audit (planned for 2000/1) will therefore be carried out prospectively with ongoing data collection.

3.19.15

Are we achieving the guidelines on preoperative assessment of colorectal cancer patients? ■

Mr M G Thomas, Consultant Senior Lecturer in Coloproctology

Local practice was measured against Royal College of Surgeons' guidelines (1996). The guidelines recommend that patients have a full blood count, urea and electrolytes, chest X-ray and computerised tomography (CT) or ultrasound of the liver. In addition, rectal carcinoma should be imaged with CT, magnetic resonance imaging (MRI) or endoluminal ultrasound. A retrospective review of patients undergoing potentially curative elective surgery for colorectal cancer between April 1995 and June 1996 was performed, followed by a review of patients 6 months following publication of the guidelines.

- Results pre-guidelines: (n=93) FBC 100%; U&Es 100%; CXR 97%; Liver imaging 72%; Pelvic imaging 44%.
- Results 6 months post-guidelines: (n=35) FBC 100%; U&Es 100%; CXR 94%; Liver imaging 71%; Pelvic imaging 86%.
- 6 to 12 months post-guidelines: (n=38) FBC 100%; U&Es 100%; CXR 97%; Liver imaging 95%; Pelvic imaging 72%.

These results (and a reminder of the guidelines themselves) were communicated to all grades of surgical staff. The audit cycle was continued with re-evaluation of clinical practice over a subsequent 6 month period. The audit process has improved our pre-operative assessment of

patients with colorectal cancer but has not yet achieved the standards of the published guidelines. On-going audit with a change in clinical practice is required to meet these standards.

3.19.16

Are patients admissions to wards following day surgery avoidable? »

Caroline Spours, Senior Staff Nurse

The objective of this continuous monitor is avoid unnecessary overnight admissions by careful management of operating lists. During the period February-July 1999, 31 day case patients were subsequently admitted overnight (1.87% - an improvement on 20.3% for the corresponding period in 1998). Anaesthetists' comments indicated that 23 of these admissions were avoidable. Opening hours of the Unit have been extended by one hour.

General Surgery, Trauma & Orthopaedics (T&O) and Urology

3.19.17

Are hospital casenotes being properly maintained? «

Heidi Bishop, Clinical Audit Facilitator

Results from this previous audit were presented in May 1999, however no specific recommendations were made.

T&O

3.19.18

Is internal x-raying of greenstick distal radial fractures useful? ■ ▶

Dr K Sehat, SHO

This current audit is looking at management strategies for greenstick distal radial fractures. Data from 99 patients is being collected from casenotes.

3.19.19

Are we providing a friendly and efficient reception by a well-informed multi-disciplinary team throughout the Trauma Orthopaedic and Plaster Department? ■ ▶

Staff Nurse Sharon Nicholson

The purpose of this audit was to find out how patients perceive their reception through the clinics. 25% of patients attending 3 different clinics were questioned at their time of attendance. 100% of patients were satisfied with their reception through clinic. However only 35% of patients were seen within 30 minutes. It is recommended that the information board should move into the main seating area, in view of patients seated opposite. Waiting times should be indicated clearly on the board and kept up to date. Patients should be verbally informed. Maintenance of the reception lighting is required and high chairs are required for hip replacement patients. These recommendations are yet to be presented for discussion.

3.19.20

How are open long bone fractures being treated and what are the outcomes? ■ ▶

David Nelson, Registrar

The aim of this audit, which involves liaison with a consultant Plastic Surgeon from Frenchay, is to assess the need for combining the care of open long bone fractures with plastic surgery involvement at the early stage. Data is currently being collected retrospectively using case notes for all patients with an open long bone fracture over a 1 year period.

Urology

3.19.21

Does the information given to patients undergoing Trans-Urethral Resection of the Prostate (TURP) meet their needs and expectations? « ▶

Alison Geale, Senior Staff Nurse

The audit lead has left the ward and hand-over to new lead is currently being arranged.

3.19.22

REGIONAL AUDIT

Urology Related Deaths ■

John Probert

The aim of this audit is to examine the accuracy of recorded information regarding urological patient mortality in the South West. If there is significant inaccuracy it will allow development of procedures to ensure correct certification. The UBHT MDI system identified 15 patients who died within 30 days of being admitted or undergoing a procedure, under the care of a urologist. On examination 4 patients had died of non-urological causes and were under general surgeons (3) and a physician (1). Despite this a urologist is named on the post-mortem sheet as consultant responsible. 3 patients died of 'medical' causes. There is a need for improved accuracy in the recording of patient information.

3.19.23

REGIONAL AUDIT

Clinical Management of Bladder Tumours ■ ▶

John Probert

This aim of this project is to achieve uniform management and follow up of bladder cancer patients across the South West region. Headed up by the South West Urologist Audit Committee, the audit is seeking to identify how the different centres in the South West region manage G3 pTa/pT1 bladder tumours by collecting data on whether the patient has received radiotherapy, cystectomy, intravesical therapy, cystoscopy, cystodiathermy, IVU, and urine cytology. A specific question is whether patients who present with G3 carcinoma of the bladder are more likely to suffer upper tract disease than other patients. Data is currently being analysed.

Occupational Therapy

3.19.24

Is the transport service provided for home visits satisfactory? ■ ▶

Maria John and Rosemary Johnson

This audit involves staff from OT, wards and Community Services. The aim is to ensure that the patient and OT are transported safely. Data for 90 home visit journeys is currently being collected.

3.19.25

Are patients with fractured neck of femur satisfied with the service provided by Occupational Therapy? ◀

Georgina Simpson, Occupational Therapist

Questionnaires were sent to patients seen by the OT department as a way of monitoring and improving the quality of the service provided. Unfortunately the response rate was low and consequently no clear, significant conclusions could be drawn. A quality impact analysis has since been carried out in order to refine the aims, objectives and methodology of the audit. A new audit will be undertaken in 2000/1, with a quantitative rather than qualitative focus.

Speech & Language Therapy

3.19.26

Are Speech & Language Therapy records being maintained according to UBHT policy? ▶

This is an annual monitoring exercise.

PROBLEMS ENCOUNTERED & LESSONS LEARNED

"The audit presentation meetings are scheduled to take place every 6 weeks in protected time during the Friday afternoon educational meeting. However during the last 6 months the Friday afternoon meeting has been held at Southmead and so there has been a lack of audit

meetings due to there being no appropriate time or venue. However the Friday afternoon meeting has now returned to the BRI and the 6-weekly audit meeting is back up and running with excellent attendance.

A problem that was highlighted in last years report was that some audits are not being completed, mainly due to the project lead leaving the trust. One way that this is currently being addressed within the directorate is by ensuring that a consultant has overall responsibility for each audit so that when an SHO leaves the new SHO can take the project forward.”

ALSO SEE...

For Paediatric Surgery, also see **Children’s Services**.

APPENDIX A

UBHT Clinical Audit Strategy

1. Definition

Clinical audit is

The systematic and critical analysis of the quality of clinical care including the procedures used for diagnosis, treatment and care, the associated use of resources and the resulting outcome and quality of life for the patient¹

Clinical audit is a multi-professional activity in which clinical processes are monitored to ensure best practice and in which clinical outcomes are measured to ensure patient outcomes meet or exceed associated expectations. At its best, clinical audit is patient-focused, where appropriate crossing artificial boundaries of primary, secondary and continuing care.

2. Context

The 1997 White Paper *The New NHS* and 1998's *A First Class Service* reinforced the position of clinical audit as an essential element of professional practice in the Health Service. Clinical audit is therefore at the heart of UBHT's arrangements for **Clinical Governance**² and integral to the Monitoring aspect of the national **Clinical Effectiveness** initiative³

This document updates and revises the previous clinical audit strategy written in 1996.

3. Aims

The aims of clinical audit at UBHT continue to be:

- To improve the quality of care received by patients by promoting clinically effective (i.e. best) practice
- To improve health outcomes for patients
- To contribute to improved clinical cost-effectiveness of treatments

4. Strategic objectives

- To encourage multi-professional audit as part of routine clinical practice
- To focus audit activity on areas where there is clear evidence about clinically effective practice
- To participate, where appropriate, in national and regional audit initiatives
- To respond, where appropriate, to identified local concerns and complaints
- To encourage the development of robust clinical standards, guidelines and care pathways
- To ensure that, where indicated, clinical audit projects lead to positive changes in practice
- To ensure that all Trust staff have access to audit support staff who can provide them with advice and guidance when planning and undertaking clinical audit
- To continue to develop links with other related groups within the Trust, including the Research & Development Support Unit, Postgraduate Library and Consumer Involvement & Information Unit

¹ Promoting Clinical Effectiveness, Dept of Health, 1996

² Clinical Governance is a system which involves agreeing, delivering and monitoring clinical standards within the Trust - see Clinical Governance - information for staff, UBHT, 1998

³ See Clinical Effectiveness Strategy, UBHT, 1999

- To facilitate the use of clinical audit to enable the Trust to meet its obligations for Clinical Governance
- To provide the Trust Board via the Clinical Governance Committee with relevant information about clinical audit activity in the Trust
- To advise Bristol Primary Care Groups in clinical audit and the development of their Clinical Governance arrangements
- To make appropriate information relating to the Trust's audit activities available through the UBHT website
- To actively explore ways in which patients and carers can most appropriately and effectively be involved in Trust clinical audit activities
- To encourage the professional development of Trust audit support staff
- To ensure that all clinical audit resources are used in ways which maximise benefit to the Trust and to patients

4.1 Training & Education

The following strategic objectives relate specifically to the organisation and delivery of training and education:

- To ensure that all clinical staff and managers have access to training in basic audit skills. This training will be provided both within directorates and through the Trust's Staff Development Programme
- To ensure that staff also have access to training in the following:
 - ⇒ Writing standards and guidelines
 - ⇒ Care Pathway Development
- To establish and maintain links with the University of Bristol and the University of the West of England
- To promote knowledge of clinical audit through continued development and review of the Trust's *How to...* guidance booklets
- To share training materials through the Trust website
- To participate with other appropriate departments and organisations in the planning and delivery of training relating to Clinical Effectiveness, including:
 - ⇒ Basic awareness of evidence-based healthcare
 - ⇒ Critical appraisal skills

ⁱ Promoting Clinical Effectiveness, Dept of Health, 1996

ⁱⁱ Clinical Governance is a system which involves agreeing, delivering and monitoring clinical standards within the Trust - see Clinical Governance - information for staff, UBHT, 1998

ⁱⁱⁱ See Clinical Effectiveness Strategy, UBHT, 1999

CHRIS SWONNELL
CLINICAL AUDIT CO-ORDINATOR
FEBRUARY 1999

APPENDIX B

UBHT Clinical Audit Staff

DIRECTORATE	AUDIT SUPPORT	GRADE (A&C)	ROLE / W.T.E
Anaesthesia	Nikki Evans (x3465)	5	Audit (1.0)
Cardiac Services	Paul Dillon (x4093)	6	Audit (0.5) and Informa
Children's Services	Chrissie Gardner (x5046) & Martin Norris (x2199)	5	Audit (1.0)
		5	Audit (0.?) and Informa
Community Services	Fiona Clark (929 1010) + secretarial support	5	Audit (0.7)
		3	Audit (0.1)
Dental Services	Carolyn Southwell (x4973)	5	Audit (0.45) and Inform
Homeopathy	Sue Barron (973 1231)	5	Audit (0.4)
Medicine	Marian Connolly (x3085)	5	Audit (1.0)
Obs, Gynae & ENT	Eleanor Ferris (x5794)	5	Audit (0.75)
Oncology	Mairead Dent (x3370)	5	Audit (1.0)
Ophthalmology	Sue Barron (x4675)	5	Audit (0.4)
Pathology	James Osborne (x2513)	MLSO grade	Audit (0.5) and MLSO
Radiology	Sally King (x3857)	Radiography	Radiography & Audit
Specialty Services	Clare Conroy – <i>Pharmacy</i> (x5705) Katherine Wathen – <i>non-Pharmacy</i> (x4620)	Pharmacist	Pharmacy & Audit
		4	Audit (0.2)
Surgery	Simon Sewart (x2589)	5	Audit (1.0)
Central Office	Chris Swonnell (x4146) Tracey Jones (x4053) Kerry Reid (x4146/4053)	SMP	Audit (1.0)
		6	Audit (0.8)
		2	Audit (0.55)

Membership of the Clinical Audit Committee

Mr Zen Rayter (Chairman)
(Nursing Representative)
Mr Chris Swonnell (Clinical Audit Co-ordinator)
(Trust Board)
Audit Convenors - see above
(Avon Health Authority)
Mrs Naaz Nathoo (Secretary to Committee)
(Consumer Involvement & Information Unit)

Mrs Carol Rainbow

Mrs Lindsey Scott

Mr David Allegranza

Mrs Bette Baldwin

APPENDIX C

'Current' projects from 1998/9 annual report which do not appear in the 1999/2000 report

A number of audits reported as being in progress at the time of last year's report do not appear in the main body of this year's report. This is because:

- A) there is no further work to report or
- B) the project was abandoned (reasons for this are given where they are known) or has been postponed
- C) the project was incorrectly coded in last year's report

Project references are those stated in the 1998/9 Report.

Children's Services

3.4.3.7

Is the endocrine testing service being run in a timely fashion?

Dr E Crowne, Jill Gethin

Project abandoned.

3.4.3.8

How useful and relevant is the information currently given to parents of children receiving Endocrine tests?

Dr E Crowne, Jill Gethin

Project abandoned.

3.4.3.9

Are school medical room facilities suitable for medical examinations?

Dr Mary Rodgman, Community Child Health

No further action taken.

Community Services

3.4.4.12

What is the incidence of recurrence of leg ulcers within one year of healing?

Sue Hinchley, District Nurse, Amelia Nutt Clinic

This project was abandoned and work has been redirected towards 3.7.8 in this year's report.

Critical Care

3.4.1.3

Are patients experiencing headache after obstetric regional anaesthesia?

Dr S M Kinsella, Consultant Anaesthetist

Project temporarily postponed due to other commitments.

3.4.1.8

What is the incidence of post-operative nausea and vomiting within 48 hours post strabismus surgery?

Dr F Forrest, Consultant Anaesthetist

Project temporarily postponed due to other commitments.

Medicine

3.4.7.3

National Sentinel Audit on Patient Falls

Ruth Bailey, Senior Physiotherapist

Care of the Elderly

Participation in this national initiative ceased when the audit lead left the Trust.

3.4.7.10

Are all new patients having serological testing for syphilis?

Jane Scott

No further information provided.

3.4.7.16

Is the nutritional status of patients being adequately monitored?

Dr Chris Probert, Consultant

No further information provided.

3.4.7.18

Is the Trust prescribing policy being followed in the directorate of Medicine?

Katherine Ashworth

The audit has not yet got off the ground due to delays in implementing the policy itself.

3.4.7.19

Are patients satisfied with information about osteo-arthritis of the knee?

Mandy Cottle

No further information provided.

3.4.7.20

Can the DNA rate in the Physiotherapy Department be reduced?

Guy Canby

This project was abandoned after the project lead left the Trust.

Obstetrics and Gynaecology / ENT

3.4.9.16

Are patients being referred to ENT Casualty Officers appropriately?

Dr Rani Seehra



Project lead left without presenting report. Has not returned to present results despite request. This topic not currently a major concern for ENT but will be considered for re-auditing in the future.

Occupational Health

3.4.10.1

How long does it take to see an Occupational Health doctor?

Carole Brooke, Administration Manager

No further information provided.

Ophthalmology

3.4.12.3

How effective and efficient is the service are we providing to diabetic patients?

Richard Markham, Consultant Ophthalmologist

Soon after this audit began the Eye Hospital received funding for a new retinal camera. In addition one of the consultants has recently gone part time and has started a medical retina

clinic. The service for diabetic patients has changed significantly as a result. In the light of the changing circumstances it was decided to postpone the audit until the new system is in place and fully operational.

Pathology

3.4.13.18

How useful is skin immunofluorescence as a technique?

Dr Chris Collins, Consultant Histopathologist

No further information provided.

3.4.13.19

Are we complying with CPA standards for Bacteriology?

Mrs Jacki Watts, Chief MLSO

No further information provided.

Radiology

3.4.14.10

Does anticoagulation reduce the diagnostic power of ventilation / perfusion scans in patients with suspected pulmonary emboli?

Dr P Richards, Dr M Thornton, Dr E Loveday

This project was due to be followed up by another member of staff following departure of the original team, but this person has also since left. The follow up on this project has therefore been effectively abandoned.

3.4.14.12

How accurate is ultrasound reporting of chronic diffuse liver disease?

Dr Heather Andrews, Consultant Radiologist

No further information provided.

Specialty Services

3.4.15.3

How are 5HT3 receptor antagonists being used and by whom?

No further information provided.

3.4.15.7

Are patients on the Bone Marrow Transplant (BMT) Unit achieving recommended nutrient intake?

Clare Kelly, Pharmacist

Staff shortages have delayed re-audit.

Surgery

3.4.16.7

Can local standards be agreed for the management of C3 lesions in breast cancer?

Deborah Markham, Research Registrar

The audit lead has left to work in Taunton and has taken her audit with her.

3.4.16.15

Are patients satisfied with post-operative pain relief on the surgical and trauma wards?

Jacqui Gannon, Pain Manager

No further information provided.

APPENDIX D***Adherence to directorate forward programmes for 1999/2000***

Whilst many clinical audit projects are organised on an ad hoc basis in response to emerging problems or directives, there is nevertheless a continuing need for planned audit programmes at the start of each year. Forward plans should indicate local priorities and provide audit staff with a manageable structure to work within. The information below indicates that approximately half the projects identified in forward plans for 1999/2000 were actually carried out. Whilst this does not reflect upon the quality of directorate audit programmes, the information may nevertheless prove helpful to the CAC in considering the role of forward planning in the future.

Directorate	Proportion of forward plan audits undertaken
Cardiac Services	<i>Not applicable (no forward plan)</i>
Children's Services	9/14
Community Services	4/6
Critical Care (formerly Anaesthesia)	3/3
Dental Services	5/7
Homeopathic Medicine	<i>Not applicable (no forward plan)</i>
Medicine	1/5
Obstetrics, Gynaecology & ENT	6/11
Oncology	5/11
Ophthalmology	3/4
Pathology	6/19
Radiology	4/8
Specialty Services	2/6
<i>Surgery</i>	<i>5/7</i>
TOTAL	53/101

APPENDIX E

Directorate forward programmes for 1999/2000

For the coming year, in addition to those projects identified as 'current' in this year's report, directorates have indicated that they propose to focus their audit programmes on the following topics:

Cardiac Services

- For 2000/2001 annual reports for Cardiac Surgery, Cardiology, CCU, Chest Pain Clinic and Thoracic surgery.

Other audits, which will be ongoing during the next financial year, are:

- Cardiac Rehabilitation Programme
- Day 5 discharge target
- As part of the 'National Service Framework' we will be developing the Directorate's audit system, so as to collect the required data set as part of the agreed guidelines.

Children's Services

(To be advised).

Community Services

Audits Just Starting

- Major Documentation Audit
This multi-disciplinary audit will involve all professions in the Directorate. It will be done in two stages, the first stage commencing in April 2000, looking at the basics (i.e. notes written in black ink, contact information, allergy status etc.). Second stage, planned for late 2000, will look at content. Audit lead Jess Dougal.

Proposed Audits Under Discussion

- Incontinence Pants & Bed Pads
Audit lead Carole Davey. Looking at the issue of incontinence equipment, and if it is effective and cost efficient.
- Child Protection, Review of Case Management.
Audit lead Mary Boyle. Do all staff find this process useful?
- Vulnerable Adults
Audit lead Rose Toson. Looking at identification and management issues.
- Referrals to Integrated Nursing Teams
Audit Lead Rose Toson. Looking at issues around volume since integration, spread of delegation of work throughout the team, and whether referrals appropriate.
- Male Catheterisation
Angela Perrett. Is the Trust's standard for male catheterisation training being met?
- Vitamin K Administration
- Breast-feeding

Annual Plan of Re-Auditing Standards.

- Leg Ulcer Assessment June 2000
- Leg Ulcer History July 2000
- Sterling Pressure Sore Scale Oct 2000
- Identifying Patients at Risk Nov 2000
- Orientation of New Staff Dec 2000
- Discharging from Caseloads Feb 2001

Critical Care

(To be advised).

Dental Services

Directorate-wide

- Crash call number

Restorative

- Response times to school of dental hygiene

Restorative/Orthodontics

- Joint ortho/restorative on treatment plans

Oral medicine

- Re-audit on reporting on radiographs

Oral Surgery

- Avulsed permanent teeth
- Management of Third Molars

Paediatric Dentistry

- Re-audit on dental health of children attending cardiology outpatient clinic

Community Dentistry

- Medical Histories

Homeopathic Medicine

- Pharmacy Prescriptions
- Information in letters to GPs (re-audit)

Medicine

- Early medical review of discharges
- Post-take ward rounds
- Home management of exacerbation of Chronic Obstructive Pulmonary Disease
- Lung Cancer

Obstetrics, Gynaecology & ENT

Obstetrics

- National Sentinel Caesarean Section Audit
- Care Plan Re-Audit

Gynaecology

- Laparoscopic Sterilisation re-audit
- Gynaecological Cancer

ENT

- National Comparative Audit of Surgery for Nasal Polyposis and Rhinosinusitis
- Informed consent
- Tonsillectomy secondary bleeds (re-audit)
- Fine Needle Aspirations (with Pathology)

Oncology

(To be advised).

Ophthalmology

- Squint
- Diabetic Retinopathy
- Trabeculectomy
- Endophthalmitis
- Humphrey Fields Tests
- Listing for Cataract Surgery - Patient Survey

Pathology

Histopathology

- Correlation between cytological and histological diagnoses in respiratory specimens
- Standard of histology reporting of lung resection specimens
- Urological audit of bladder tumours
- Retention of tissue retrieved at autopsy
- Annual review of post mortems activity
- The educational benefit of post mortems
- Effect of the use of immunohistochemistry in diagnostic practice
- Correlation between cytological and histological diagnosis in thyroid specimens
- RCPATH National Sentinel Audit of *Helicobacter.pylori*a and the management of dyspepsia (continuing participation throughout year)
- Clinicopathological meetings (continuing participation throughout year)
- External Quality Assurance (continuing participation throughout year)

Chemical Pathology

- Unreported results due to computer 'black-holes'
- Nicotinic acid stimulation tests
- Laboratory investigation of C1-Esterase Inhibitor deficiency
- Lipoprotein-a test
- Amino acid analysis
- Telephoning of results
- External Quality Assurance (continuing participation throughout year)

Haematology

- The use and abuse of ANCA testing
- Choice of tests for mitochondrial antibodies
- Use of Hep-2 cultured cells as a replacement for mouse cells in the ANA test
- External Quality Assurance (continuing participation throughout year)
- Serious Hazards of Transfusion (continuing participation throughout year)
- Blood product usage (regular feedback to surgical directorates)

Microbiology

- Laboratory requests for microbiology post needlestick injury
- Compliance with antibiotic policy, with particular reference to *Clostridium difficile*
- Laboratory turnaround (continuous monitoring throughout year)
- External Quality Assurance (continuing participation throughout year)

Infection Control

- Annual UBHT Infection Control Audit
- Handwashing practice in surgical wards
- Accuracy of infection indicator data in clinical coding

Radiology

- Accuracy of reporting of Senior Radiographer compared to Radiologist
 - What is the clinical value of radiographing dislocated shoulders with two views pre and post re-location?
- (plus other projects to be advised)

Specialty Services

MEMO

- Effectiveness of servicing methods for infusion devices
- Professional users of medical equipment – training survey

Medical Physics

- The appropriateness of referrals from the Bristol Eye Hospital for Carotid Duplex Scans
- Comparison between angiographic findings and ultrasound duplex findings on patients with lower limb arterial disease
- Is the length of time between patients having vascular studies tests and angiography examinations acceptable?

Medical Illustration

- Are digital photographs adequate for medical reports?

Pharmacy

(To be advised).

Surgery

(To be advised).

APPENDIX F

DEVELOPING EXCELLENCE IN CLINICAL AUDIT

The stated aims of the UBHT Clinical Audit programme are as follows:

- To improve the quality of care received by patients by promoting clinically effective (i.e. best) practice
- To improve health outcomes for patients
- To contribute to improved clinical cost-effectiveness of treatments

The roles of the Trust's Clinical Audit Convenors and Facilitators are central to our efforts to realise these objectives.

Clinical Audit Convenors

Remit and Responsibilities:

Clinical Audit Convenors are directorate clinical audit leads. The role of Clinical Audit Convenor encompasses the following responsibilities:

1. Identifying (in conjunction with the directorate audit committee) a directorate annual audit programme
2. Ensuring that a clinical audit budget can be identified at directorate level and that this budget is used appropriately
3. Providing guidance and support to the directorate Clinical Audit Facilitator
4. Liaising with the directorate Audit Facilitator to:
 - i. Establish and maintain a structure for clinical audit within the directorate. It is generally expected that this structure will include an audit committee/steering group and a forum whereby the results of audit projects can be presented to a wide directorate audience.
 - ii. Use opportunities to promote, develop and encourage clinical audit, clinical effectiveness and evidence-based practice within the directorate
 - iii. Ensure collection of information to facilitate the production of the annual Clinical Audit Report

As part of establishing and maintaining a directorate structure for clinical audit, Convenors take a leadership role on their respective directorate audit committees/steering groups. Additional responsibilities of Convenors as part of this committee role include:

5. Approving the directorate audit programme
6. Considering and, if appropriate, approving specific audit proposals

7. Monitoring the progress of audit projects and providing a forum to discuss any concerns arising from those projects
8. Encouraging the participation of all clinical professions/disciplines in the directorate audit programme

Collectively the Convenors meet (along with other nominated Trust representatives) as the UBHT Clinical Audit Committee (CAC). The remit of the CAC was also set out in the 1997/8 Annual Report:

9. To guide Trust strategy relating to clinical audit and clinical effectiveness
10. To approve annual audit plans for all directorates
11. To monitor the progress of the audit programme via quarterly reports from directorates
12. To receive and approve the annual Clinical Audit Report
13. To ensure adequate and equitable distribution of audit funding to directorates
14. To ensure that the Trust's I.T. developments support the implementation of clinical audit and evidence-based practice

Skills, experience and resources:

In order to fulfil the role of Clinical Audit Convenor, individuals appointed to these posts would ideally have the following skills, experience and resources to draw upon:

Skills & Knowledge

- A. Awareness of the objectives of CA and its place within the broader context of Clinical Effectiveness and Clinical Governance
- B. An understanding of CA methodologies - ideally, some evidence of formal training in CA skills
- C. The ability to create an open and participative audit culture which encompasses colleagues from all relevant health professions

Experience & Interest

- D. A genuine interest in CA – Convenors are the Trust's 'champions' of Clinical Audit
- E. A level of seniority sufficient to ensure credibility amongst decision-makers and budget-holders
- F. Previous experience of CA project management

Resources

- G. Paid sessional time to dedicate to CA activities
- H. The support of a competent, trained, Clinical Audit Facilitator
- I. A minimum period of office – ideally three years – on which to focus their efforts. This could subsequently be extended at the Convenor's request

Implications:

To meet these requirements it stands to reason that Convenors should be carefully selected within each directorate. At present, however, Convenors are appointed in an ad-hoc fashion without formal reference to the sort of criteria outlined above. In many instances, the Convenor will be the most recently appointed / most junior consultant in a directorate (i.e. last in through the door). This may have significant implications for their ability to exercise influencing skills.

With one exception, Convenors are not currently paid sessional time for CA. This means that the task of steering the local CA programme becomes an onerous task undertaken in each Convenor's own time. The Trust is fortunate to have a group of dedicated Convenors at the present time, however in order to continue to attract the right people to the role in the future, the package must be made an attractive one; not a poisoned chalice.

If the costs currently associated with paying the Audit Convenor in the Directorate of Medicine were replicated across the Trust, the additional annual cost of providing Convenors with protected sessional time for audit would be approximately £75,000.

Clinical Audit Facilitators

Remit and Responsibilities:

Clinical Audit Convenors are supported in the day-to-day management of the CA programme by Clinical Audit Facilitators. A Clinical Audit Facilitator has now been appointed to each clinical directorate. The core activities performed by Audit Facilitators are as follows:

1. Together with the audit convenor, to establish and maintain a structure for clinical audit within the directorate
2. To promote and encourage participation in clinical audit, clinical effectiveness and clinical governance activities within parameters established by the audit convenor
3. To support the audit convenor in promoting and facilitating multi-specialty and multi-professional/disciplinary audit projects
4. To support the audit convenor in promoting and facilitating primary care interface audit
5. To provide support and advice on audit design and methodology, data analysis and report writing to clinicians and other healthcare professionals
6. To provide formal training in basic clinical audit skills
7. To act as an information/education resource within the directorate for all matters relating to clinical audit
8. To undertake literature searches - both upon request and at own initiative
9. To organise and assist with data extraction from manual or computer records
10. To participate where required in the processes of setting standards, producing guidelines and establishing monitoring mechanisms
11. In conjunction with the directorate audit convenor, to facilitate the production of an annual programme of audit topics
12. To organise directorate audit meetings and presentations
13. Where necessary, to make formal presentations of audit findings

14. To produce written audit reports
15. To liaise with the directorate clinical audit convenor in providing summary audit information for the Trust Clinical Audit Annual Report
16. To liaise as necessary with other local or national groups and organisations
17. To deputise, where necessary, for the audit convenor
18. To ensure that personal training needs appropriate to the demands of the job are brought to the attention of the Clinical Audit Co-ordinator
19. To carry out the above duties with minimal supervision

Knowledge, Skills and Experience:

In order to fulfil the role of Clinical Audit Facilitator, individuals appointed to these posts are generally expected to possess the following knowledge and skills:

- A. Awareness of the objectives of CA and its place within the broader context of Clinical Effectiveness and Clinical Governance
- B. Excellent communication skills
- C. High standard of numeracy and literacy
- D. Working knowledge of databases and spreadsheets
- E. Good general education*

* whilst the majority of staff appointed to Facilitator posts possess at least a first degree, this is not a *requirement* of the post. Past experience shows that staff without degrees succeed as well as graduates in clinical audit posts

In addition to the above, it is likely that successful candidates for audit posts will have one or more of the following:

- F. Previous experience in the NHS – either in a clinical role, or in a quality/research-related post
- G. Proven training skills
- H. Proven project management skills

UBHT currently employs fifteen Facilitators in a variety of arrangements (some are full-time audit staff; others share their audit role with other clinical or Information duties). By January 2000 six of these staff will have obtained or be in the process of studying for nationally recognised professional CA qualifications. This means that the Trust possesses one of the country's most highly trained bodies of CA staff.

Clinical Audit Facilitators are currently employed at the level of A&C Grade 5 (i.e. £14,096 - £17,148). In the past eighteen months the Trust has lost no fewer than **seven** Facilitators (i.e. half the team). Whilst one member of staff has retired, the reasons for the remaining six staff leaving the audit team are essentially two-fold:

- an absence of opportunities for career progression within the audit team
- inadequate remuneration

Three staff have left the Trust for better paid positions with greater prospects. Of more concern, however, is the fact that three more trained CA staff have moved from CA posts to

Information posts within the Trust (these posts currently being paid at A&C 6 – i.e. £17,148 - £20,062). Unless the Trust can provide audit staff with similar levels of remuneration, we can expect to see this pattern of events repeated in the future. In the context of the increasing demands of Clinical Governance and the Clinical Effectiveness agenda, and at a time when the Trust's CA performance is under scrutiny as a result of the Bristol Inquiry, we must find ways of recruiting *and retaining* high calibre clinical audit staff.

Implications:

To be able to attract and retain high calibre audit staff, we must be able to provide an acceptable level of remuneration coupled with an opportunity for career progression.

This could be accomplished by appointing staff initially to the position of G5 Audit Facilitator with promotion to G6 status dependent upon:

1. achievement of objectives established through the IDPR process
2. clear demonstration of CPD (e.g. working towards a relevant external qualification)

In 1998/9 approximately £145,000 was spent employing the team of audit facilitators (i.e. not including Central Office staff). The additional cost associated with an uplifting of grades would gradually filter through over time, however if all current G5 Facilitators had been successfully re-graded to G6 in 1998/9, the additional annual cost to the Trust would have been in the region of £25,000 (i.e. an increase c7% on total audit budget).

Clinical Audit Committee
13/01/00

APPENDIX G

**POLICY FOR FUNDING 'PROFESSIONAL' STUDIES FOR
CLINICAL AUDIT SUPPORT STAFF**

1. Support will be offered to Clinical Audit support staff* (A&C Grade 5 and above) who wish to study for the Certificate in Clinical Audit & Clinical Effectiveness at the University of Wales Swansea, or an acceptable equivalent (for example, personal circumstances may preclude study away from home). The Clinical Audit Central Office will pay 100% of course fees and any reasonable expenses incurred during periods of study away from home required as part of the agreed course. Staff will however be expected to pay for any additional course materials over and above those provided by the body running the course.

* applies only to staff where:

- a) the appointment is supported by the UBHT Clinical Audit Committee.
- b) undertaking training will lead to identified benefits for the directorate CA function.

Note: There is no minimum period that staff need to have worked before becoming entitled to the training support described above.

2. Staff wishing to study further for the Diploma or MSc in Clinical Audit & Effectiveness at the University of Wales Swansea (or equivalent) will be expected to contribute 25% of course fees and expenses incurred in the second and subsequent years of their studies, unless the training is deemed essential by the Clinical Audit Co-ordinator and the Chairman of the Clinical Audit Committee.
3. All other non-essential training requests will be considered on their merits; in particular whether the proposed studies will make a significant contribution to clinical audit in the directorate in question, or the body of knowledge of the Trust CA team as a whole. Trust guidance notes state that:

"In deciding the level of support for [non-essential] activities, managers should consider:

- *What contribution will this training and development activity make to the aims and objectives of the directorate/department?*
- *What contribution of funds and/or time would be most cost-effective? Should the individual use part of their annual leave entitlement? Would it assist the individual if fee contributions were deducted from salary over an agreed period?*
- *Is internal provision available rather than accessing external programmes? Are training and development needs being appropriately identified? Are the individual's aspirations congruent with organisational needs?"*

UBHT Clinical Audit Committee
13/01/00

APPENDIX H

POLICY FOR BIDS TO CLINICAL AUDIT COMMITTEE (CAC) FOR FUNDING

General Guidance

1. Bids for funding will only be considered if they seek to facilitate clinical audit activity within the Trust.
2. All such bids will be considered on their merits.
3. All bids should be submitted on a Clinical Audit Proposal Form*.

* Note: if the bid does not relate to a specific audit project or programme, a case for funding should be provided in the form of a letter to the Chairman of the CAC. Sufficient detail should be provided to enable the CAC to arrive at an informed decision about the bid.

4. Bids relating to specific audit projects or programmes will be viewed more favourably if they satisfy the following criteria (which apply to all audit projects, regardless of funding status):
 - Clearly focused question that the project is seeking to address
 - Multi-professional
 - Addresses one of the key aspects of Clinical Governance as set out on the Proposal Form
 - Clearly formulated clinical standards against which to audit*
- * Note: where a bid relates to a proposed *pre*-audit, there must (by definition) be a clear commitment to setting clinical practice standards at the end of the project, and if possible an indication of the specific area in which it is hoped to set those standards. Bids relating to pre-audits will be viewed particularly favourably if they relate to areas of tertiary referral and/or clinical areas where no regional/national standards currently exist.
5. The bidder will need to satisfy the Committee that the Clinical Audit budget is the most appropriate source of potential funding for their project and that they have explored other options.
 6. Bids up to £200 (inclusive) may be jointly agreed by the Chairman of the CAC and the Clinical Audit Co-ordinator.
 7. Bids over £200 will be considered by the CAC. A representative for the bid will usually be asked to attend the CAC to present their bid and answer any questions the Committee may have.
 8. The Chairman of the Committee will write formally to all bidders to inform them of the outcome of their bid. Where a bid is rejected, the Committee undertakes to provide the bidder with an explanation for its decision and where possible to provide suggestions to improve the bid for possible future re-submission.

Bids to enable the purchase of P.C. software

9. Bids for audit software must be linked with an identified audit project or programme, for which a Proposal Form has been completed.

10. The Committee will wish to receive assurances that hardware already exists (without need for upgrade) to support the software in question.
11. Bids for software will be viewed more favourably if they meet the following criteria:
 - Software has ongoing applicability for data collection / re-audit
 - Software has potential for application in other specialties/directorates
 - Software supports a nationally recognised audit programme
12. Bids for software must also be cleared via the usual IM&T/Trust mechanisms and should conform with requirements for the current Procurement programme (e.g. will software integrate with EPR?)
13. The Committee will not entertain bids relating to software licences.

Bids to enable the purchase of P.C. hardware

14. Bids for PC hardware will normally not be entertained by the Committee.
15. In exceptional circumstances the Committee may consider it appropriate to agree to such a purchase. An examples of 'exceptional circumstances' could be that:
 - Serious unforeseen problems arise in audit-related matters which require I.T. hardware to facilitate a resolution
 - The Trust is required to participate in a national audit (e.g. stipulated by NICE/CHI) which requires the provision of additional PC facilities to those already available in the Trust

In such circumstances, bids will be viewed more favourably if the hardware in question will be available for use beyond the specialties/directorate making the bid. If, for example, hardware is needed to support a project which will run for a fixed period of time, a bid for a desk-top PC would be unlikely to be entertained; a bid for a laptop which could subsequently be held centrally and made available for loan to all directorates would be viewed more favourably.

When a bid is approved

16. When bids are approved, the bidder will undertake to send a written report to the CAC at the end of the project (or after 12 months if the project is of a longer duration) detailing the results of the audit and explaining how the project has benefited clinical practice. Failure to submit a report may jeopardise future bids for funding from the directorate in question.

UBHT Clinical Audit Committee
13/01/00

APPENDIX I

Framework for directorate reviews

The tool shown below has been developed from the *Clinical Audit Assessment Framework* published by Kieran Walshe & the HSMC, University of Birmingham.

Section	Questions
Topic identification and selection	Is there a systematic approach in place and in use? <i>(How are topics selected? What processes take place? Who is involved in these processes? Are topics chosen in conjunction with any other systems, e.g. CRM, directorate business plan, complaints, etc?)</i>
	Are available routine information sources used? <i>(Which IT systems are used (if any)? Is there scope for making more of IT systems at the present time?)</i>
	Does the process involve all appropriate stakeholders? <i>(Doctors? Nurses? Other healthcare professionals? Patients & carers? Managers? Others?)</i>
	Does it consider: High volume, cost or risk; evidence of problem; evidence on effectiveness; likely improvement? <i>(In other words, are there any set criteria used in planning, and if so what are they?)</i>
Planning	Is there a forward plan for clinical audit?
	Is there a regular review of progress against the forward plan?
Impact	Are change management structures and mechanisms in place? <i>(Who takes responsibility for seeing that changes result from clinical audit? How is this managed? (e.g. does someone have to report on progress to the audit committee/steering group?) If there are resource implications from an audit, who takes responsibility for exploring options?)</i>
	Do improvements in the quality of healthcare result? <i>(How do you know? Can you identify anything that was done differently in projects which did result in improvements?)</i>
	Do improvements in the healthcare process result?
	Do improvements in the structure, culture, organisation, etc, result?
	Have changes become permanent, embedded in practice? <i>Examples?</i>
	Is the programme well regarded and valued by stakeholders? <i>Honest impressions?</i>
Management and direction	Is overall responsibility for the audit programme placed with a single, senior clinician?
	Does a senior clinician take overall responsibility for each audit that's carried out?
	Is there a group/committee responsible for directing the clinical audit programme?

Support and resources	Does the directorate have clinical audit support staff?
	<p>Does this person/s have the necessary skills?</p> <p><i>(Does this person currently have any unmet training needs? Do they have an annual review? Who is involved in this? Do they have formal objectives for the year? How are their objectives decided? Are these objectives regularly reviewed? By whom?)</i></p>
Coverage and participation	Are there active audit groups or teams in all sub-specialties?
	Can all departments show they have an active programme of clinical audit in place?
	Do all departments/services have a meeting/forum for audit?
Training and skills development	Is there a named individual in all departments responsible for clinical audit?
	Is there training in clinical audit for clinical professionals?
	Is the training in clinical audit evaluated?
	Do all new members of clinical staff receive info/training in clinical audit?

APPENDIX J

<p style="text-align: center;">U.B.H.T. CLINICAL AUDIT PROPOSAL FORM</p>
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If you are planning to undertake a clinical audit, this form should be completed and submitted to your **directorate audit convenor** for approval (audit convenors are senior representatives - usually clinicians - who organise and manage directorate audit programmes).

Important note: If your proposed project is primarily concerned with obtaining new knowledge about the efficacy or relative efficacy of a given treatment or investigation, it may be more appropriate for you to complete a **UBHT Research Project Registration Form**. If in any doubt, please discuss with your Audit Facilitator and if necessary speak to someone in the Clinical Audit Central Office (x4146/4053) or the RDSU (x3473)

Before you go any further...

- Have you discussed your project with your directorate **audit facilitator**? (Audit facilitators are responsible for the day-to-day running of directorate audit programmes. They can provide you with practical advice about planning and carrying out your audit – including completing this form)
- If appropriate, have you discussed the project with a **patient representative**?
- If this project will have implications for **other directorates**, have you discussed it with them?
- And does your project have the support of **senior colleagues**?

If you need additional funding for this project...

Most projects are supported through the use of audit facilitators' time and expertise. If however, you require financial assistance for your audit, please complete the relevant part of the proposal form. The Trust Clinical Audit Committee is able to provide additional financial support for a limited number of appropriate projects each year.

Your clinical audit convenor is

Your clinical audit facilitator is

DIRECTORATE:

ASSOCIATE DIRECTORATE/SPECIALTY:

AUDIT LEAD: (Name, job title and contact details)

OTHER PARTICIPANTS:

AUDIT TOPIC

What question is the project seeking to answer? For example it might be....

- "Is the Trust following Royal College Guidelines for the treatment of X?"
- "Are referrals to clinic Y appropriate?"
- "How long does it take to dispatch reports about Z to GPs?"
- "Are patients experiencing pain following surgery?"

PLEASE EXPLAIN WHY YOU WANT TO LOOK AT THIS TOPIC

Please state any specific objectives you have

WHICH ASPECT/S OF CLINICAL GOVERNANCE WILL YOUR PROJECT DEAL WITH?

- | | |
|--------------------------------------|--------------------------|
| Clinical Effectiveness | <input type="checkbox"/> |
| Clinical Risk Management | <input type="checkbox"/> |
| Consumer Involvement | <input type="checkbox"/> |
| Value for Money / Cost Effectiveness | <input type="checkbox"/> |
| None of the above | <input type="checkbox"/> |

WHAT STAGE OF THE AUDIT CYCLE AT YOU STARTING FROM?

- Pre-audit (finding out what current practice is, with the intention of setting clinical standards)
 First audit
 Re-audit

STANDARDS

Will you be measuring practice against agreed standards/guidelines/benchmarks?
 Yes No

If 'Yes', please state what they are (attach a separate sheet if this is easier)

Standard Statements	Target %	Exceptions

If 'No', will the audit be undertaken with the explicit intention to develop such a measure?

Yes No

Important: If you have not agreed best practice and you do not intend to do so, you need to question whether or not the proposed project is a clinical audit (you will need to discuss this further with your audit facilitator)

EVIDENCE BASED REFERENCES:

Have you undertaken a literature search to help identify best practice?

Yes No

If yes, please provide details any key journal references:

AUDIT ASSISTANCE REQUIRED:

Each of the following is an important part of the audit process. Unless you are experienced in clinical audit, you are advised to seek the advice of your audit facilitator.

- | | | | |
|----------------------|------------------------------------|-------------------|--------------------------|
| Audit methodology | <input type="checkbox"/> | Literature search | <input type="checkbox"/> |
| Design of audit tool | <input type="checkbox"/> | Data collection | <input type="checkbox"/> |
| Data analysis | <input type="checkbox"/> | Written report | <input type="checkbox"/> |
| Other | <input type="checkbox"/> (specify) | | |

DATA COLLECTION:

How many patients will be in your audit sample?
(If you will be collecting data over a fixed number of days/weeks/months, please estimate total sample size)

.....
Please state how you have calculated or agreed upon this sample size?

.....
Method:
Retrospective Prospective

Where will you get your data from?
From casenotes Staff survey From computer system
Patient survey Other (please specify)

.....
If you will need casenotes to be pulled for this audit, please state how many:

Remember:
Note-pulling for clinical audit can be organised through your audit facilitator or directly through the clinical audit central office. There is no charge for this service.

FUNDING:

Please complete the following section if your project will require funding. Bids of up to £200 are usually discussed by the Chairman of the Clinical Audit Committee (CAC) and the Clinical Audit Co-ordinator. Bids over £200 are considered by the full committee. If your bid is for in excess of £1000, it is likely that you will be asked to present your case to the committee in person.

Total amount of funding requested: £

Please explain why funding is needed and what the monies will be used for if the bid is successful (please attach a separate sheet if necessary):

.....
Please provide a breakdown of the total cost

Staff Costs £ Equipment £

Other (e.g. labs, transport) £

If you are hoping to employ a member of staff to collect audit data, please answer the following questions:

Could the data be collected as part of routine patient care?
Yes No

Could the job be done by someone less qualified?
Yes No

APPENDIX K

APPENDIX L

APPENDIX M

Addendum to UBHT Clinical Audit Report 1999/2000.

The tables below show how UBHT's baseline Clinical Audit allocation was used in 1999/2000, based on end-of-year figures provided by the Finance Department. This information was not available at the time the report was written, the figures in the report having been based on estimates kept by the CACO during the year. It will be noted that the revised figures show a slightly smaller carry forward into 2000/1 than previously anticipated.

For 1999/2000 the budget was allocated as follows:

Medicine	£22,000
Oncology	£17,000
Surgery	£17,000
Anaesthesia (now Critical Care)	£16,500
Children's Services	£16,500
Ophthalmology & Homeopathy	£14,000
Pathology	£11,500
Radiology	£11,000
Community Services	£9,500
O&G/ENT	£9,000
Cardiothoracic Services	£8,500
Dental Services	£8,000
Specialty Services	£6,500
Occupational Health	£1,650
TOTAL TO DIRECTORATES	£168,650
Clinical Audit Central Office	£70,278
Bids Fund (controlled by CAC)	£34,000
TOTAL	£272,928
Final carry forward from 1998/9	£21,000
TOTAL BUDGET AVAILABLE FOR 1999/2000	£293,928

In 1999/2000, the budget was used to support clinical audit in the following ways:

Clinical Audit Staff	£209,598
Projects	£30,671
Study, training, conferences, meetings (including related travel costs)	£14,778
Capital expenditure (audit server, network connections)	£2,641
Miscellaneous directorate expenses (floats)	£8,650
Miscellaneous central office expenses (including books, journal subscriptions)	£1,612
TOTAL EXPENDITURE FOR 1999/2000	£267,950
Total resources available at start of year	£293,928
Total carry forward into 2000/1	£25,978

Chris Swonnell
10/07/00