NEWSLETTER

Autumn 2012

s an avid cycling fan, I've become rather obsessed with the Lance Armstrong doping scandal over the past couple of months and have consequently devoted hours to reading books, dossiers and web confessions about the saga. I am now desperate to find some way of claiming CPD points for this activity.

The key lesson learned from the episode is the need for independence, flexibility and continual improvement within a regulatory authority when faced with a highly motivated opponent. The Union Cycliste Internationale's drug testing programme fell someway short of this for technical and cultural reasons. Similar failures were responsible for the ineffectiveness of regulation of financial institutions prior to the 2007 melt-down.

As infection specialists, we are acutely aware of the power of change as we continually try to keep pace with the evolutionary intelligence of enemies which have a 20-minute generation time and an endless capacity to reinvent themselves. We have a pressing need for industry and government to collaborate in the repair and straightening of the antimicrobial development pipeline but we also need the tools to react to "unknown unknowns". Novel threats are most likely to originate overseas as exemplified by the rapid worldwide spread of carbapenemase producing organisms and, more recently, by the cases of severe respiratory illness caused by a novel coronavirus emanating from the Arabian peninsula. Global travel makes the ingress of these and older but no less serious exotic pathogens a continual risk.

A well co-ordinated response to such pathogens is critical both to optimise patient outcome and to minimise the threat to public health. The HPA Imported Fever service was launched earlier this year with the aim of supporting local services in this manner and Baz Nadjm introduces the service to readers in an article on page 4 of this newsletter.



Change is written into the constitution of the BIA and we must bid farewell to Jane Stockley, to whom we owe a great deal for her tireless efforts as President of the BIA over the past 3 years. It is testament to her leadership that the association has become so firmly established in its own right in such a short space of time. Jane's successor, Peter Moss, formally introduces himself in his new role as President on page 3. In addition we have the reports from the Treasurer, Steve Barratt; the Clinical Services Committee Secretary (MM/Virology), Tony Elston, and, discussing trainee issues, Sarah Logan (ID SAC trainee representative) and Thushan DeSilva (Trainee Professional Affairs representative).

Change is also the subject of "A trivial infection" this edition with a series of anagrams for readers to muse over.

The editorship of the newsletter is also about to change. I am greatly indebted to all those who have taken time to contribute articles over the past couple of years and would like to wish my successor well. As Churchill said, "To improve is to change; to be perfect is to change often."

Dave Partridge

Newsletter Editor (david.partridge@sth.nhs.uk)

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NEWS

European antibiotic awareness day

EAAD falls on the 18th of November each year and aims to improve public and professional awareness of the need for effective antimicrobial stewardship. This year's focus will include primary care with the launch of the RCGPs TARGET (Treat Antibiotics Responsibly; Guidance, Education, Tools) toolkit.



As the day itself falls on a Sunday this year, activities will instead be launched on Friday 16th. The Department of Health has created a range of educational materials, including posters, videos and factsheets which can be downloaded from:

http://www.dh.gov.uk/ health/tag/eaad/.

A twitter chat will also occur on the 20th November with European Centre for Disease Prevention and Control experts on antimicrobial resistance.

2012 HIV standards of care to be launched

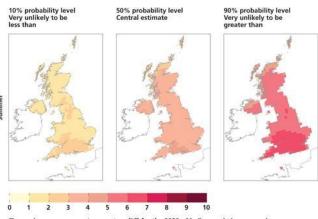
The BHIVA standards of care for people living with HIV are designed to provide a reference tool for clinicians, patients, managers and commissioners highlighting the key components which should be present in order to provide first class HIV care. The launch will be on 29th November 2012 just before World AIDS day on 1st December.

UK Standard for Microbiology Investigations

The first quarterly report of the UK SMI is now avail- Elections for a number of posts on BIA council able to BIA members at this link and includes details of priorities for the steering committee and current and future consultations

Effect of global warming on health under the spotlight

The Health Protection Agency has produced an update of its 2008 report on the health effects of climate change in the United Kingdom. The 282 page document can be accessed via this link.



The document encompasses all foreseeable impacts of our changing climate including sections on water, food and vector-borne infections and the influence of potential effects on pathogen, vector and any zoonotic reservoirs.

The report highlights the need for improved collaboration between public health and veterinary agencies and the requirement for further research into the likely modifications to human and vector behaviour, which will occur. It also suggests that effects upon potential disease vectors should form part of the environmental impact assessment of wildlife habitat management programmes and that better methods of surveillance for imported vectors and pathogens should be developed.

Get involved - stand for a seat on BIA council

(including trainee rep with responsibility for editing this newsletter) will be occurring in the near future look out for further details coming soon...



From the New President...



I will in due course be following my predecessor's excellent example and producing a President's Bulletin, but I want to take this opportunity to introduce myself. For those of you who don't know me, I am a Consultant in Infectious Diseases at Hull & East Yorkshire Hospitals Trust (where I am also Director of Infection prevention and control, and Deputy Chief Medical Officer). My main area of subspecialty interest is viral hepatitis, although I also participate in our general infectious diseases clinics and ward work.

We have already said goodbye to Dr Jane Stockley at the last Council meeting, but I want publicly to thank her for the work she has put in as the first President of the British Infection Association. The new society has rapidly established itself as an important contributor to education, research, and national policy on infection, and has already achieved a higher profile than either of the two 'parent' organisations. We are being asked to participate in an increasing number of national consultations, and are becoming recognised as an important contributor to practice guidelines across the spectrum of infection diagnosis, prevention and control, and management. Much of this is down to Jane's contribution during her term in office, and she has been an excellent foundation president.

Significant changes are being proposed in the

way that infection services are commissioned and provided in England and Wales. Debate continues about the rights and wrongs of the centralisation of microbiology laboratories, while the process has already started in some areas. A new model of specialised commissioning is being developed under the auspices of the National Commissioning Board, which will have implications for infectious disease units, and services for HIV, viral hepatitis, and tuberculosis. The new joint training programme in infection (currently still resulting in separate CCTs in infectious diseases and microbiology) will start recruiting in 2014. The more general changes in the National Health Service, and the increasing role of 'Any Qualified Provider', will bring challenges and perhaps sometimes opportunities. The BIA is committed to promoting the best possible clinical and laboratory services for people with infectious diseases, and will maintain its profile as a source of expert opinion and guidance for those making strategic decisions.

A number of Council members finish their terms of office soon. We are currently preparing 'job descriptions' for the posts which are coming up, and I would ask you all to think about standing for one of them. The BIA can only function if we have an active and enthusiastic Council who make things happen, and if you want to be involved in how the society develops then please put yourself forward. Further details of these posts and how to stand will be available soon.

Peter Moss

BIA President

The HPA Imported Fever Service



The HPA Imported Fever Service was conceived as a response to the increase in global travel and the corresponding rise in the numbers of UK residents and visitors seeking care for infections after travel abroad. The service offers a comprehensive molecular and serological disease diagnosis and delivers rapid results supported by clinical advice. The aim is to improve not only patient care, but public health control measures and epidemiological data collection for outbreak detection and control. This diagnostic service is connected to a clinical service that offers 24 hour advice on empirical therapy, likely differential diagnosis and immediate infection control advice. The service also has links with epidemiology and public health in order to provide an integrated service for major outbreaks and unusual illnesses and it has further links with the veterinary agencies for identifying and managing outbreaks of zoonotic infection, in accordance with the One Health agenda. The service is intended to supplement rather than replace local NHS services; essential routine bacteriology, virology and parasitology should remain the preserve of local laboratories.

The service provides 24/7 advice, accessed by a call to a single phone number (0844 7788990). The number is manned by a team of infectious disease specialists who provide expert advice to support patient management, infection control and public health interventions; from referral to delivery and interpretation of final results. To achieve this, a collaboration has been set up between specialists at the HPA (concentrated at the Rare and Imported Pathogens Lab (RIPL) in Porton Down, but including HPA microbiologists at several locations around the country), the Royal Liverpool Hospital's Tropical Infectious Disease Unit / Liverpool School of Tropical Medicine and the Hospital for Tropical Diseases at University College London Hospital.

The service is available to healthcare professionals after they have discussed the case with their local consultant in infectious diseases, microbiology or virology. Calls to this number are subject to standard network rates, the HPA Imported Fever Service does not charge for clinical advice calls.

As part of the Imported Fever Service, the expert will assess the risk of Viral Haemorrhagic Fever (VHF). If a VHF is suspected, the diagnostic service at RIPL provides a 24/7 service for the diagnosis of acute VHF and important differentials (notably malaria). Although exclusion of *P. falciparum* infection must remain a local priority, it is possible that in cases where VHF is suspected, concerns around infection control and/or lack of experience may lead to this important cause of fever being missed. Consequently a pan-genus *Plasmodia* PCR is run on all suspected VHF specimens.

Diagnostic tests for other causes of imported fever, such as Dengue, Chikungunya and Rickettsial infections are offered on a next working day basis through RIPL. Tests are typically ordered based on the geographical location visited, on the assumption that many of these infections are very difficult to distinguish clinically. Users in Scotland should be aware that turnaround time may be affected by long transport times as all samples are processed in the South West of England (at HPA Porton Down).

The Imported Fever Service page of the HPA website has links to a poster advertising the service and reminding users of the number, the referral procedure and the clinical details being gathered. In addition there are links to useful forms.

http://www.hpa.org.uk/ProductsServices/
InfectiousDiseases/
LaboratoriesAndReferenceFacilities/
RareAndImportedPathogensDepartment/
ImportedFeverService/
A full list of the tests routinely offered by RIPL is available in the user manual at: http://

www.hpa.org.uk/ProductsServices/ InfectiousDiseases/ LaboratoriesAndReferenceFacilities/

RareAndImportedPathogensDepartment/

Continued on page 5

The HPA Imported Fever Service

Continued from page 4

Whilst the range of infections being tested for at RIPL is growing, there remain a number of important tests in the diagnosis of acute imported fever that are **not** tested for at RIPL. For these, other national reference labs should be involved – including for malaria speciation, confirmation of Salmonella species from cultures, serology for Leptospirosis, Brucella, Bartonella and a range of parasitic infections.

A secondary objective of the Imported Fever Service is to improve the quality of both surveillance and clinical data on the causes of imported fever in the UK. It is hoped that over time a better picture can be

Clinical services Committee Report—Microbiology/Virology

We have met three times so far this year and the clear leader in terms of length and passion of discussions remains pathology transformation. The CSC has drawn together a table of transformation across the UK and is hoping that regional reps will keep this updated and share the contents with colleagues. At our last meeting we explored a couple of areas which are of particular concern. We are aware that one outcome in some parts of England is that primary and hospital microbiology services may be delivered by different providers; we do not think this would be in the best interests of patients and hope that this concern can be raised. We also discussed the potential for the various conflicts that medical microbiologists might find themselves in the middle of, especially between hospital trusts and pathology providers. We agree that medical microbiologists should be as involved in the generation and authorisation of results as is appropriate and that this can be mandated contractually. However we are also aware that contracts are not always as assiduously applied as would be desirable. As an example of a successful "cost improvement program" we have included a report from the Royal Bournemouth Hospital where a demand management scheme has successfully reduced laboratory costs.

Dr Tony Elston

Chair CSC

made of both the clinical features associated with manifestations of these infections, and their epidemiology.

Finally, it is hoped that the improved clinical liaison service will encourage users to send follow up samples and enable 'gold standard' serological diagnoses to be made. This should allow novel diagnostics to be developed and validated, further improving the quality of the diagnostic service.

Dr Behzad Nadjm

HPA imported fever service

PATHOLOGY SAVINGS - MICROBIOLOGY SPECIMEN DEMAND MANAGEMENT AS AN ALTERNATIVE TO LABORATORY MERG-ERS AND PRIVATISATION

Pathology service provision in the UK is currently undergoing substantial organisational change largely driven by a quest for financial efficiencies. Prompted by the recommendations of the Carter report¹ there appears, in England at least, to be a trend towards laboratory reconfiguration and centralisation, with ever increasing private sector involvement. But are we missing an opportunity here? Laboratory funding has historically been based on total activity via block contracts which do not incentivise demand management. Clinically inappropriate, poor quality specimens often continue to be accepted for processing. Examples include superficial swabs from chronic ulcers and wounds, some genital swabs and large numbers of urine cultures. Results generated from processing are often misinterpreted and lead to unnecessary antibiotic prescribing. Ever-increasing involvement of private pathology providers who seek to maximise their profits may have little, if any, incentive to manage demand. We report a successful initiative to reduce unnecessary urine requests.

At The Royal Bournemouth Hospital an audit of inpatient adult urine specimens in general medicine and medicine for the elderly showed that over 50% of urine requests were inappropriate and that these requests were usually made by nursing staff based

on the result of a routine dipstick test, rather than on the patient's clinical picture. A "positive" result (even for parameters other than leucocyte esterase or nitrite e.g. protein and blood) often led to a urine culture request and a positive culture result (commonly found in elderly patients) to unnecessary antibiotic treatment. We appreciate that data exists to show that if interpreted correctly, dipstick testing of urine may have a good negative predictive value (NPV) for UTI in certain patient groups, but in our experience dipstick tests are generally misinterpreted in the diagnosis of UTI and this is supported in the recent literature².

culture from adult and elderly medical in-patients (approximately 1000 specimens per month). The approach centred on ensuring mid-stream urines were sent for culture where UTI was clinically suspected on the basis of suggestive symptoms and signs of UTI homes to advise against dipstick testing urines from rather than on the basis of a urine dipstick test result. The dipstick test used was switched from a multiple target test including leucocyte esterase and nitrite to a propriate over-requesting of urine culture on the five target dipstick which tests for glucose, protein, pH, ketones & blood but not for nitrites or leucocytes. lead to inappropriate prescription of antibiotics. A Midstream urines were sent on clinical suspicion of UTI and only processed if clear clinical symptoms suggestive of UTI were provided on the request form, and the form was signed with a legible doctor's name (nursing staff being no longer allowed to request urine culture). When appropriate information was absent from the request form, the sample was refrigerated and an immediate result issued electronically giving the reason for refusal and allowing clinicians 48 hours in which to visit the laboratory to complete the request appropriately if they felt culturing the sample was indicated. This has resulted in a 50% fall (sustained after one year) in urine numbers processed. Our hospital employs an "internal recharge" for each test request and so the medical directorate has seen real savings in the amount that we recharge them. The savings have been achieved by laboratory workforce re-profiling to accommodate decreased demand - we had a vacant post which we do not now need to fill and have therefore relinquished. No adverse impact on service quality and no safety issues have been identified. Similar demand management initiatives are now being extended to other areas within the hos-

pital.

We are also in the process of applying this concept to primary care. For community patients we endorse the Health Protection Agency UTI quick reference guide for primary care, with emphasis placed on clinical symptoms suggestive of UTI³. The NPV of a visually clear urine sample (with comparable clarity to water) in females with less clear cut lower urinary tract symptoms is emphasised. The HPA algorithm quotes 97% NPV for a visually clear urine in this category and our laboratory reproduced this showing an overall NPV of 96% with analysis of >200 consecutive urine samples. Performing addi-We decided to demand manage urine samples sent for tional dipstick testing on these only improved the NPV by 1%. We have therefore embarked on an educational drive to reduce dipstick use by delivering seminars at GP education meetings, attending individual practice meetings and writing to nursing elderly patients. This has been received favourably by community clinicians who recognise that inapbasis of dipstick testing often occurs and can also draft electronic decision support tool based on the HPA Primary Care UTI guidance has been developed and is currently under trial. We will report the results of our community initiative in due course.

> In summary, we believe that managing demand by reducing numbers of clinically inappropriate tests will serve to control wasteful use of laboratory services and achieve the required savings whilst improving overall service quality. This counters the argument that radical laboratory mergers and private sector provision are the only way to achieve savings.

Dr Nick Cortes and Dr Mick Martin

Department of Microbiology, Royal Bournemouth Hospital

- 1. Report of the Review of NHS Pathology Services in England. Department of Health, 2008
- 2. Khasriya R. J Urol 2010: 183; 1843-7
- 3. Diagnosis of UTI- Quick Reference Guide for Primary Care. Health Protection Agency, 2011.

Treasurer's report

Taking over as BIA Treasurer was an interesting experience. On day 1 I found I was in possession of a cheque book, but couldn't sign any cheques because the bank didn't recognise me. That required confirmation by the officers of the Association, but unfortunately the bank's lists of who the officers were was out of date, and the present incumbents weren't recognised as in a position to confirm anything. Four months down the line we still haven't sorted this out and I'm grateful to my predecessor Al Leanord, the only person the bank recognises, for continuing to sign cheques (and for remaining alive in order to do so). When we eventually get out of this, we will need to ensure that there is more than one signatory in case of fatal errors, and ideally will switch to electronic banking, which looks like it may mean needing to change banks. With the changes in membership of the BIA Council, a further complication revealed itself with the need to change the "trustees" of the Association's registration as a Company. Because the Company is registered in Scotland, it has to have an address in Scotland. Or else it can be moved to England & Wales by dissolving the Company and creating a new one which is obviously a nonstarter. It looks like the registered Company office will end up being that of our solicitors in Edinburgh.

On the finance side, the Association continues with an overall value of approximately £1.2 million. Our investment portfolios have been undergoing review by Mr John Lithgow, a former senior investment banker. We currently have two such portfolios reflecting the investments of the former AMM and the

BIS. If Mr Lithgow is able to achieve improvements by reconfiguring our investments, any extra profit will be shared between the BIA and a charitable organisation run by Mr Lithgow which assists charities in generating finances. We have no particular reason to believe our investments are suboptimal, but in the past Mr Lithgow has been able to find opportunities improve the value of certain other charities with which he has worked. Our major single item of expenditure in the recent past has been a contribution of £70,000 to an MRC studentship, and

we have also joined kindred organisations in making a number of contributions, each of a few thousand pounds, to sponsor short symposia and other meetings.

With the assistance of Hartley Taylor, we have been examining the membership database in order to ensure that subscription rates are correctly applied. There is quite a variety of such rates, as can be found on the website, depending on whether one is a trainee, or overseas, or retired, and wants an electronic journal, or a hard copy, etc. Matters are also complicated by the database being a mixture of the former AMM and BIA separate membership lists, with a lot of people having been members of both anyway. The annual checking of subscriptions takes up a lot of time by Hartley Taylor. It is also clear that at the moment, one can join as a trainee and remain with free membership forever, because there is no way of checking status. Approximately one third of our 1500-or-so membership does not pay a subscription. If you think you no longer qualify for free membership, please do let Hartley Taylor know.

Steve Barrett

Fat, Vitriolic, Inane (anag)

This edition's "A Trivial Infection" consists of a series of anagrams to solve - each is a mutated form of a pathogen's name. Answers, as always, will be available on the website.

- 1. I'm popular, lamented
- 2. Hyperbolical erotic
- 3. Useful, smug plagiarist
- 4. Slim, groovy, acute
- 5. Sad acid cannibal

Spotlight on developments at the **Infectious Diseases Specialist Ad**visory committee

The SAC meetings are held every 3 months at the RCP and all Training Programme Directors are invited. Dave Partridge (ID/Micro Sheffield) and myself (Sarah Logan ID/GIM London) have been attending as BIA trainees representatives for the last couple of years and Thushan DeSilva (ID/Micro Sheffield) has now taken over from Dave.

I wanted to highlight some of the main trainee issues that arise so that you are all aware of the sort of things that get discussed and you have the opportunity to comment and through either Thushan, myself or your TPD you can raise any concerns.

Recruitment

As many of you will know there has been a move to centralise recruitment. This year the applications were centralized in England and Wales (currently not Scotland) but the interviews were done by individual deaneries. London was not able to take part in the process and hence has only advertised LAT's this year. I was asked for comments from trainees with respect to the process particularly as there may be a move to centralise all the interviews as well next year (the second round will be done in one site Cardiff this year). If any trainees took part in the process or have any comments on centralised recruitment perhaps they could let me know.

Core Infection training

This has been on the cards for a while now but due to the inevitable politics of two Royal Colleges and lots of interested parties it is unlikely that this will be ready to roll out until at least August 2014.

The current curriculum and assessment

Three deaneries are piloting a change in the summative learning experiences required for the ARCP. There will be more detail about this for the trainees in those deaneries. Essentially going with concept of less is more.

Eportfolio

Improvement in the synchronization of the JRCPTB and eportfolio databases should make sure all trainees are properly registered with the JRCPTB and pay their fees. It will also mean that results of MRCP and the SCE will be displayed on the portfolio. The problem of two portfolios for the joint ID/ MMV trainees remains. The RCPath is going to be approached to see if the portfolios can be amalgamated onto the RCP one as it seems easier to navigate. Any comments on this please email me.

Certification

The issue of getting a CCT in more than two specialties is repeatedly raised at the SAC on an individual trainee basis. The RCP and GMC do not support accreditation in more two and they are clamping down on it. A Tropical CCT is the same as the ID CCT with the extra bits so trainees should not be getting both. Triple accrediting with ID/ GIM and Microbiology or Virology is also a thing of the past it seems. There may be an option of applying for an additional CCT through article 14 but this has not been tested in practice as far as I know. The same seems to be the case for those wanting to accredit in Acute medicine and ITU but again I am not sure if this has been tested in practice. Any comments on this please email me.

Sarah Logan,

Trainee Representative, ID SAC

BIA Trainee's Day

BIAN Following positive feedback last year, the BIA trainee's day will once again be held alongside FIS, on 22nd November.

The theme will be 'Tropical and Travel Related Infection' and, we are extremely fortunate to once again have some excellent speakers presenting.

The full programme can be found on the BIA website

We look forward to seeing you in Liverpool!

Trainee Professional Affairs

Summary of plans for new infection training:

Following support from the RCPath after the college survey, plans to implement new infection training are going ahead. It is hoped that delivery of the new curriculum will commence in August 2014. All trainees will enter the programme via CMT. The core infection training (CIT) component will consist of 1 year clinical infection and 1 year laboratory-based training in medical microbiology (MM) and virology (MV). Following this, individuals will enter higher infection training (HIT) in infectious diseases (2 years), MM or MV (2 years) or joint ID/MM or MV (3 years). Any research time will be additional. Those who want to accredit in ID and G(I)M will have an added year (total 5 years), although it is expected that G(I)M experience will need to be incorporated into CIT and HIT time as well, in order to fulfill the G(I)M curriculum. This may have implications for units where ID is not part of the G(I)M rota.

The plans are for a written assessment towards the end of CIT, which will be an amalgamation of the current MRCPath part 1 and components of the ID SCE. ID/MM or MV and MM/MV trainees will complete MRCPath part 2 in HIT. There will be no further formal exams for ID trainees.

The current proposal from the infection training working group is that all those wishing to obtain a dual CCT in ID and G(I)M will be selected into 'runthrough' programmes at ST3, but that all others will retain flexibility until the end of ST4, where there will be a further stage of application and selection into ID, ID/MM or MV or pure MM/MV programmes. It is not yet clear if this further selection will be at a national level or within deaneries. There were strong feelings within the group both for and BIA trainee (professional affairs) representative against this approach. Please contact me if you wish your opinion on this or any other matter on infection Please contact me on thushandetraining to be conveyed. We are running an interactive session on the topic at the BIA autumn trainees opinion about any training matters: day on the 22nd of November, 2012.

GMC position statement on moving to the most up to date curriculum:

The GMC have concluded that there will be a requirement for trainees working towards a CCT to transfer to the most recent GMC approved curriculum. This will apply to all trainees with an expected CCT date of later than 28.2.14. This process is ex-

pected to occur from April 2013 onwards, at a point when trainees move from one year to another within the programme (usually at the ARCP). Most importantly for ID trainees, this means there will be a requirement to complete the ID SCE for all trainees who CCT later than 28.2.14, regardless of the curriculum they were initially enrolled on to. The suggestion is that it will also mean moving from a paper to eportfolio for some individuals.

GMC position statement on time out of training:

The GMC have determined that the maximum permitted absence (that does not result in an extension to training) during each 12-month period of the curriculum is 2 weeks (whole time equivalent). This is to include all forms of absence e.g. sickness, maternity, compassionate, paid/unpaid leave other than annual leave. The 3 months of exceptional leave previously granted during maternity absence will also not be allowed. The ID SAC are planning to write to the JRCPTB to express the view that these changes may be too prescriptive in an era of competency based curricula.

BIA trainee database:

We are attempting to establish a comprehensive database of all infection trainees. If you have not done so already (in response to emails via the RCPath or RCP), we would appreciate it if you could provide the following details (via email to thushandesilva@hotmail.com): Name, specialty, deanery, estimated CCT date, email address.

Thushan de Silva.

silva@hotmail.com if you wish to convey an

Events calenda

Dates	Title	Venue	Organising body Website	Website
	November			
	5th annual Orthop aedic			http://www.ukoms.co.uk/sheffield-orthopaedic-infection-
8th-9th	Micorbiology/Infection Meeting	Sheffield	UKOMS	meeting/
	Managing Infections - Current and Future			http://www.rcpath.org/Resources/RCPath/Migrated%20Res
9th	Trends	London	RCPath	ources/Documents/M/MI_progV2.pdf
19th-21st	FIS/HIS 2012	Liverpool	HIS	http://www.fis-infection.org.uk/
				http://www.britishinfection.org/drupal/content/bia-
22nd	BIA Trainee's day	Liverpool	BIA	trainees-meetings
				http://bsac.org.uk/events/forthcoming-events/infection-
22nd	Quality Improvement Workshop	Liverpool	BSAC	guality-improvement-workshop-2/
	2012 Antibiotic Resistance Mechanisms			http://bsac.org.uk/events/forthcoming-events/arm-2012-
29th-30th	Workshop	Birmingham	BSAC	workshop-for-researchers/
	December			
	Human Papillomavirus (HPV) and related			
17111	ATIOCHIOCO A TITRIOCAL CARBO	LOHOH	IAICA	
14th	'Interact and update!' - interactive training day for Microbiology registrars	London	RCPath	http://www.rcpath.org/Resources/RCPath/Migrated%20Resources/Documents/M/MT2 Programme.pdf
	<u>January</u>			
18th	Virology Trainee's Day	London	RCPath	http://www.rcpath.org/Resources/RCPath/Migrated%20Resources/Documents/V/VT %20Prog.pdf
	<u>February</u>			
1st	6th HIV dilemmas	Manchester	BIA	www.hartleytaylor.co.uk
	<u>March</u>			
14th	BSAC Spring Meeting	London	BSAC	http://bsac.org.uk/events/forthcoming-events/bsac-spring-meeting-2013/
25th-28th	SGM Spring Conference	Manchester	SGM	http://www.sgm.ac.uk/meetings/MTGPAGES/Manchester20 13.cfm



