Continuing Professional Development

Record Templates[1]

Medical Scientist with 7 years' experience whose primary area of responsibility is in Microbiology

You must read the audit guidelines document before completing this record for audit purposes and submitting.

It is important that all information identifying any third party must be removed from any records submitted. Do not, under any circumstances, provide information that would enable the identification of a service user.

Do **not** attach any supporting documentation with this record.

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[1] Version issued June 2020

Name:	John Doe	CORU Registration Number:	MS54321
Audit period from:	1st April 2021	Audit period to:	31st March 2022
Registration Board	Medical Scientist Registration Board		

Implement			Evaluate & Reflect	
Date and time spent When did you undertake this learning activity?	**Type of Learning Activity** What was the name of the activity?	**CPD credits** Approx. 1 CPD credit for every hour of new or enhanced learning achieved	**Learning Outcome** What have you learnt through completing this activity? How have your skills and knowledge improved or developed?	**Impact on practice** How have you integrated this learning into your practice? How has this learning made a difference to your capability and performance in your role?
17/06/21 10:00-11:00 1 hour + literature review of 1 hour	RCPATH Webinar on Laboratory Safety during COVID-19 and follow-up literature review	1	Enhanced my knowledge of laboratory safety when handling COVID-19 samples in the laboratory. I learned some useful, practical tips that I can implement in my laboratory. These included: • Biological safety considerations- BSL 2 is sufficient • Corners cannot be cut with the time in lysis buffer to expedite time to result as this introduces an unnecessary risk to staff • That "dry" swabs can be used if there is another shortage of swabs. The consultant virologist in Wales described her validation of dry swabs and showed that it was as reliable as swabs in media if no long-term storage is involved.	I updated relevant SOPs to reflect my learning regarding Safety during COVID-19 to improve safety in our laboratory. Namely, emphasising the importance of waiting 10 mins for the lysis buffer to inactivate the virus. There was also interesting discussion on the webinar about the need for face coverings/masks within the laboratory. Some laboratories in the UK were not insisting on the wearing of masks within the laboratory, while the consultant virologist felt it was important to ensure the safety of staff, especially to mitigate the risks posed by staff-to-staff transmission of the virus as opposed to catching the virus from clinical samples, as this would be rare if proper laboratory protocols are in place. Following on from this I did some independent research on rates of transmission within clinical laboratories. It

				does appear to be rare but there was an interesting case study from a clinical laboratory in the United States. The laboratory staff were screened on a weekly basis for SARS-COV2. On one of the weeks a staff member tested positive with a high ct value, a cycle threshold (ct) value is an indirect measure of the amount of genetic material of the virus present), indicative of very early or very late infection. Repeat testing returned a negative result, which is in line with late infection but doesn't tally with the previous negative results attained on weekly screening. An investigation into the matter showed that the staff member had been preparing control material prior to the testing, sequencing of the previous positive result showed that there were only segments of RNA present indicative of the positive control contaminating the nasal cavity of the staff member involved. This demonstrates a further need to wear masks when preparing control material to ensure that there isn't contamination of the respiratory passage with RNA as this may lead to a false positive result (i.e. a non-infectious contamination risk) if a laboratory staff member is subsequently tested as part of contact tracing, etc. These points reinforce the importance of wearing masks within the laboratory, I communicated this back to my colleagues.

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06/03/22 12:00-18:00 6 hours	Co-chaired a workshop	3	Prepared material for presentation to colleagues: I prepared a powerpoint presentation as the introduction to the workshop. I conducted research on the background content to ensure that the presentation I had prepared was correct and up to date. Communication: I spent the afternoon of the workshop interacting with colleagues from all over the country. Listening to issues that they had encountered in their research and dissemination, offering solutions that have worked for me previously and helping colleagues organise their data and content into a format that would be suitable for submission to a Journal for peer review.	I had done a similar workshop previously, but the interactive nature of these workshops with different attendees adds to the experience and means you learn a lot. For instance, from working through data and research produced by colleagues, you learn new methods and some tips and tricks to take back to the laboratory. In this workshop I learned about an issue with an assay that we would be validating soon and my colleague from up the country talked me through how they overcame their issues, which will expedite our validation and also allow us to ensure that the same issues aren't evident for patient samples when testing goes live. The workshop enhanced my presentation skills (useful for journal club and future presentations), my teaching and training skills-useful for mentoring research projects within my laboratory due to the open, interactive nature of the workshop. We also had some very useful, open ended discussion

				about various instruments and platforms used in our labs and the pros and cons of each. One of the attendees described how they acquired funding for new instrumentation that would be useful to put into action in the future as some instruments in the lab near end of their usable life.

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Completed 13/02/22 Time spent weeks-10 hours	Lead author on a peer reviewed article	8	Research: Laboratory work was carried out over 3 years. The physical data was then interpreted by in-silico analysis. I have no background and very little prior knowledge of in-silico analyses having attended a single lecture whilst pursuing my degree. I self-taught myself how to use three different in-silico platforms based on information available with the packages,	The lessons I learned from both the physical research and subsequent in-silico analysis had impact on best practice as the methods described had not been performed previously and as they had been published they can be implemented in any clinical laboratory around the world. Following on from this, I will train a colleague of mine who is undertaking a postgraduate research degree in the clinical

			attended a three-day training on one of the packages, and spent at least 30 hours researching and testing different algorithms of the platforms before choosing the platform that performed best. The clinical laboratory data that was acquired over three years was then interrogated over a period of months to determine if the research hypothesis could be rejected. Journal Choice: I then conducted literature reviews over a period of days to ascertain which journal would be most appropriate to submit the findings to. The considerations included- content of journals- i.e., are they of a clinical orientation or a scientific/laboratory based one, if a journal has recently published findings similar to what I found previously and costs for publishing as I had a very limited budget and some journals have very high publication costs. Article Writing: Over a period of weeks, I wrote the article in a style acceptable by the journal that I had chosen to be most suitable based on my findings above. The article was then disseminated to my co-authors for suggestions and edits. I subsequently implemented these changes. I then prepared the accompanying documentation for submission, including cover letter, formatted figures and	laboratory. I will show my colleague the laboratory methods I developed, the algorithms I developed and employed and offer constructive advice on how to implement them into their research area. This will hopefully result in further development in their area of research and will result in a further positive impact on patient care.

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			references and submitted the article to the journal for consideration. Following peer review, there were a number of changes and recommendations that I had to implement and the article was accepted for publication.	

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09/07/21 c.5 hours	Prepared and presented a scientific poster	3	Research and Statistics: Completed extensive review of literature surrounding a new test to be implemented in the laboratory to decide upon which assay or platform to proceed with. Conducted validation study for a new test implemented in the laboratory and staff training on how to perform new test. Gathered statistics using software programme following	This activity improved my knowledge on the new assay introduced. It was a new test for the detection of SARS-COV2, what was a "new virus" to us in the lab, therefore the research and validation informed the operating characteristics of the assay in our laboratory. This information is vital for clinicians in interpreting the results generated within the lab and disseminating same through a poster is an invaluable way to attract the attentions of service users, namely medical and nursing colleagues. The review of the statistics facilitated a review of the usage of consumables within the laboratory and helped to co-ordinate consumables ordering for subsequent peaks in demand necessitated by further "waves" of the pandemic. Creating the

			training on how to use the programme by my Chief Medical Scientist. Poster Design and Publication: Designed a poster detailing the findings from the research and statistics portion. Designed poster on Microsoft PowerPoint to an A0 size. Researched poster designs that are most effective and took pictures within the lab for inclusion in the poster. The poster was presented virtually due to COVID-19, therefore I had to ensure that the poster content was clear and unambiguous as I would not be able to answer questions in the same way as you would normally when presenting a poster. I then had to record a short verbal presentation to accompany the poster. I learned how to record good quality audio and how to attach it to a PowerPoint file,	posters itself improved my IT skills as I had not made a poster with an accompanying recording previously. The fact that the conference was virtual introduced further complexity as it was essential that the content was interesting, clear and concise as I would not be present to answer questions or describe the content in brief as is the case normally when presenting a poster.

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Feb 2022 13/02/22 - 15/02/22 09:00 - 17:00 (4 days x 7 hours)	Management Course: Module 1 Communi-cations	5	Enhanced my communication skills, through learning the theory behind certain skills, how best to implement the skills practically and finally practicing the skills in the workshop. The skills learned included: • Analysis of personality types including self-analysis of personality through a modified Myers-Briggs Indicator Test. • How best to communicate with other types and tailoring your communication style for others to convey your message clearly	I found some aspects of this module very useful and have implemented them daily. I learned that it's important to tailor your message and tone depending on the recipient. The analysis of personality types made me aware of my own personality type and how I would typically relay a message. This analysis let me adapt the way in which I communicate with my colleagues to improve the outcome. The listening exercises were very useful, they taught me to listen to the full message and to not be preparing your response in your head instead of listening. These skills will improve communications between me and colleagues in the laboratory and allow me to effectively listen to colleagues. This may lead to improvement initiatives and swift resolution of issues that arise.

			• Assertiveness skills and Styles of various leaders- what is effective and what isn't • Listening exercises: including active listening. • Overcoming barriers to communication.	

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Feb 2022 13/02/22 - 15/02/22	Management Course: Module 2 Time Management	5	Enhanced my time-management skills and style through learning the theory behind various time-management tools, practical implementation and demonstration, including: • How to establish objectives including the	I found the content of this part of the course especially useful in my day to day work. I sometimes find it daunting to complete all routine tasks and then proceed to other work such as QMS, audits, completing rosters, etc. However, I have implemented the action priority matrix to help with this. I make a list of all non-urgent tasks that are outstanding and then prioritise them according to the priority matrix. This allows me to tick off the tasks that are most urgent first and move onto those that are

09:00 - 17:00 (4 days x 7 hours)			use of "SMART" goals- including an exercise of designing some for myself to implement small and larger term goals • Tools for prioritising workloads- how best to manage your time and setting priorities, including the action priority matrix and how to reduce time spent on "low impact, low effort tasks" • Implementing the action priority matrix in my day to day work as an exercise	less pressing next. I update the list every week and complete the matrix to help get through it all. I found the SMART goal tool very effective for my personal and professional medium and long term plans. They feed very well into objective setting as part of performance review with my manager and also are a useful template by which to complete plans for professional development.

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Feb 2022 13/02/22 - 15/02/22 09:00 - 17:00 (4 days x 7 hours)	Management Course: Module 3 Managing the team	5	The theory and practical implementation of managing the team, including: • Management structures-from upper HSE to hospital management to roles within the laboratory • How to manage up (where required) and down: how to effect change with management • The performance management cycle • Motivating the team	This part of the course held some very useful tips and tricks to help motivate colleagues. I found the tips on how to influence management very useful, there were some useful guides on how to prepare business cases and how to use the crucial areas in your department to leverage input from senior management, be that financial or human resources. The introduction to the performance management cycle was very informative and helps demystify the process. I know some colleagues don't look forward to these meetings, I like them as a chance to discuss the previous plan's aims and goals and set new ones for the year ahead. I think the tips and templates that were provided were very useful for when I have to do performance management reviews with colleagues in the future.

Review	Plan
What do I want or need to learn in the next 12 months?	**What learning activities will I do to achieve this in the next 12 months?**
Improve my project management skills through learning more about project management tools and methodologies. I would like to identify an appropriate approach that would improve my project management skills within the clinical laboratory. Preferably with some time-management skills as it can be difficult to complete all daily routine tasks within the laboratory whilst also completing projects and advancing the laboratory.	Aim to undertake a short course on project management. I will discuss this with my Chief Medical Scientist at my next review meeting (due within 6 weeks). I will research courses available and ask if there is support from the hospital to participate in same. I will find out if there are courses available through the hospital/HSE that are already funded and if not, I will ask if the hospital will fund/part fund another course.
Identify blind spots in my laboratory knowledge and improve my knowledge in one of these areas. In recent years I have identified that my knowledge in the areas of mycology and virology were deficient when compared to other areas within the laboratory and I addressed this by improving my knowledge in these areas through study. I will examine all areas within the laboratory and identify the area in which my knowledge is lesser than other areas. I will then set about improving my knowledge in that area through a focussed research plan following an international curriculum.	To list all areas within the laboratory and self-assess my knowledge in each, i.e., if a service user enquired about a specific test- do I know the full facts and limitations of same? I'll shortlist areas that I feel my knowledge could be improved upon. I will then refer to the curriculum of the Royal College of Pathologists for that area and begin a focussed period of study to bridge any deficits in my knowledge. In the medium term I would like to pursue the FRCpath qualification, and I have found that by studying in this way in the past three years that I have been gently introduced to the curriculum, learning style and have also improved my laboratory and clinical knowledge of areas within the laboratory.
Develop my research and publication skills. I am currently involved in an implementation project within the laboratory and feel the opportunity to publish in a peer reviewed journal will help in the dissemination of the knowledge that we have gained from the process. Furthermore, the peer review process forces you to critically evaluate your work going forward and lends itself to quality improvement initiatives in the laboratory going forward.	I want to publish the findings of the research being undertaken in the laboratory currently. This will involve summarising the laboratory work and findings that have been undertaken, to conduct a literature review to benchmark the work against international peers and best standards and to work as part of an interdisciplinary team to collate clinical data and the actual writing of the paper. I aim to have the laboratory work complete within 6 weeks. Following on from that I am to have the first draft of the paper complete in two months following completion of the first draft and disseminate to my interdisciplinary

	colleagues (medical, nursing and pharmacy) for their input, advice and corrections. I will then implement all of the above within a further month and begin the process of submitting the paper for review to an appropriate journal following a review of same.

I, the undersigned, certify that the information contained in this Record of CPD Activities is correct in all respects.

Signature: *John Doe*   **Date:** 20/02/2021

CORU Registration Number: MS54321
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