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<http://dx.doi.org/10.1002/jmrs.178>

Title	International collaboration in radiography research
Authors	Hogg, P
Publication title	Journal of Medical Radiation Sciences
Publisher	Wiley
Type	Article
USIR URL	This version is available at: http://usir.salford.ac.uk/id/eprint/48077/
Published Date	2016

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International collaboration in radiography research

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J Med Radiat Sci **63** (2016) 73–74

doi: 10.1002/jmrs.178

Effective teams result in greater productivity, speed, quality and impact when compared to people working as isolated individuals. An effective team requires leadership skills and a thorough understanding of how to assemble, develop and resource the team as it moves forward to pursue its purpose. An effective team is like a jigsaw, it will comprise of pieces that are necessary to form the whole; team members will therefore possess the required range of skills and competencies and offer different but complementary perspectives on the same problem. If the team is cosmopolitan, there will be a need to develop an understanding of people, to include their cultures, values and customs and how to communicate with them (e.g. verbal, written and non-verbal).¹ This editorial will focus on the value of international collaboration within radiography research. Illustrations from my own work will be used.

Compared with other professions, radiography has been poor at collaborating in research, with very few exceptions.^{2,3} In contrast to radiography, other professions have collaborated in research for a long time and a good example is European Council for Nuclear Research (Conseil Européen pour la Recherche Nucléaire, CERN⁴), in which many countries across the world invest and work together to study the basic constituents of matter. CERN possesses the largest particle accelerator in the world. CERN's ambition might not have been achieved by individual countries working in isolation of one another because the experts and finance necessary would probably not exist in a single country. Problems these days tend to be global; consequently, their solutions are best found through international collaborations.

For an international research team to be created, a problem in common to the potential collaborators needs to be identified. By way of example, early in 2009, I assembled a small UK team, comprising radiographers, radiologists and physicists to investigate a perceived regional problem (North West England, UK). We believed the amount of compression force used by radiographers in mammography was highly variable and was not dependent upon patient/client factors; however,

we had no proof. Over the next 6 years, we performed one cross-sectional study, one single and one multicentre longitudinal study.^{5–7} For a range of reasons, these publications attracted a lot of interest and this resulted in international research collaborations being formed to see whether the problem is global. One of these is an international collaboration and it has membership from five countries. It comprises of engineers, computer scientists, radiographers, radiologists and physicists. So far, we have discovered that compression force variability is an international problem. Not surprisingly, the collaboration has extended its initial remit, to explore possible solutions to minimise variability.

A national or international collaboration tends to be established when key individuals acknowledge that a better chance of investigating and/or solving a problem will likely be achieved compared with an individual or 'local' team approach. Aside the benefits already outlined, national or international teams stand a better chance of attracting finance to support the work. In my own experience, when I feel a project would benefit from collaboration, national or international, I make contact with the people I would like to see in the team. More often than not I use the internet to facilitate this; rarely do I meet people face to face. Face to face meetings are valuable, but they are time intensive and I think very carefully before taking time away from my desk/laboratory because travel limits me in achieving the research ambitions.

A need exists in radiography to develop relationships between current and future researchers on a global scale. International radiography societies like EFRS⁸ and ISRRT⁹ can play a facilitation role in helping to bring people together to identify common problems and solutions, through sandpit exercises¹⁰ and other activities. Aside this, as part of a developmental processes, initiatives like OPTIMAX¹¹ aim to give undergraduate and postgraduate radiographers along with qualified clinical/academic radiography staff the opportunity to participate in multiprofessional multinational teams to conduct research in highly controlled environments. The

OPTIMAX collaboration initially commenced as a five country (European), 3-week intensive residential research experience for 60–70 staff/students at a time. Working in six teams of approximately 10 members each team defines a problem, develops and validates a method, collects and analyses data and presents a written article along with a conference paper on the final day. Support sessions are focused to developing team skills, appreciating individual differences and developing project management skills. Also, key note presentations relating to generic research issues, for example, method development and validation, are given. At this stage in the development of our profession, it is necessary to facilitate collaborative research activities through international societies as well as providing international multiprofessional development activities like OPTIMAX for qualified and student radiographers.

If radiography is to progress as a profession and improve services to clients/patients, then we must conduct world leading research through international collaborations. Medical radiation sciences research is essential,¹² and if we choose to use it, the world is our laboratory.

Conflict of Interest

The author declares no conflict of interest.

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