

Aleron

Freshney Consulting

**Evaluation of the INSPIRE scheme for Medical, Dental and
Veterinary Students**

The Academy of Medical Sciences

August 2017

1. Table of Contents

1. Table of Contents	2
2. Executive Summary.....	1
3. Background and Objectives	5
3.1. Background	5
3.2. Objectives of INSPIRE.....	5
3.3. Aims and scope of the evaluation.....	6
4. Achievements of INSPIRE since 2013.....	7
5. Challenges faced by INSPIRE programmes	12
6. Key findings from interviews and surveys	14
6.1. INSPIRE for veterinary schools.....	21
6.2. INSPIRE Special Project Grants.....	23
6.1. INSPIRE in the national context	26
7. Future.....	29
7.1. Funding	29
7.2. Programme Management.....	30
Appendix I: Summary table – Grant reports.....	31
Appendix II: Survey comments	36
Appendix III: Demographics of survey respondents.....	39
Appendix IV: Definitions and List of Figures	41
Appendix V: Methodology	42

2. Executive Summary

Background

The INSPIRE scheme is a UK-wide initiative designed to engage medical, dental and veterinary undergraduates with research. It was agreed in 2012 and began in 2013, with £1m in funding from the Wellcome Trust. The grant scheme is open to all medical schools, and since 2016 all veterinary and dental schools.

Aims and scope of the evaluation

The objectives of this review are to evaluate the impact of the INSPIRE scheme and identify challenges experienced when setting up activities locally. We have also reviewed how INSPIRE fits in the clinical academic training environment and provided recommendations for the future development of the scheme.

Methodology

The evaluation is informed through desk research, an analysis of grantees' reports, interviews with representatives from medical schools and an online survey of medical, dental and veterinary students. Further details of the methodology can be found in Appendix V: Methodology.

Grant funding

Grants awarded

Since the launch of INSPIRE, the Academy has awarded 58 small grants and a further nine special project grants¹. The small grants of £10,000 over two years were awarded in three tranches, reaching 31 schools in the first round in December 2012, 21 schools in December 2014 and another six schools in 2016².

Use of grant funding

The Academy awards INSPIRE grants to selected schools, who each have the responsibility and ownership for deploying funds locally. Schools have flexibility in how they use funds – as such, variation exists between the schools from developing events with broad engagement to supporting research projects for individual students. Students from each school plan and deliver research engagement activities, with input and support from the Academic leads and in most cases with an administrative lead in support. Several schools have successfully leveraged additional funding (e.g. through funding in kind), however some schools have struggled to achieve this. There is evidence that the engagement of medical student representatives has helped to develop and deliver activities successfully.

In addition to the small INSPIRE grants, special projects have been awarded to support innovative and often collaborative projects. The special project grants enable schools to test and develop new ways to engage medical students with research at their home university and beyond. Since 2014, the grants have successfully contributed to the development of strong regional partnerships between medical schools, e.g. in Scotland or the South West.

Whilst schools have the responsibility for allocating their grant to local research engagement activities, further guidance should be provided to ensure that funds are prioritised for wide engagement across each school's student population. For example, in some schools, a higher

¹ A detailed analysis of the outcomes of the special project grants is provided in Chapter 6.

² Please note that the last round of small grants only lasted 1 year.

proportion of funding was used to support studentships and other individual awards. Whilst this is an important route for providing interested students with more research experience, the main goal of INSPIRE should be to target and enthuse the wider population of students (see Figure 1 below).

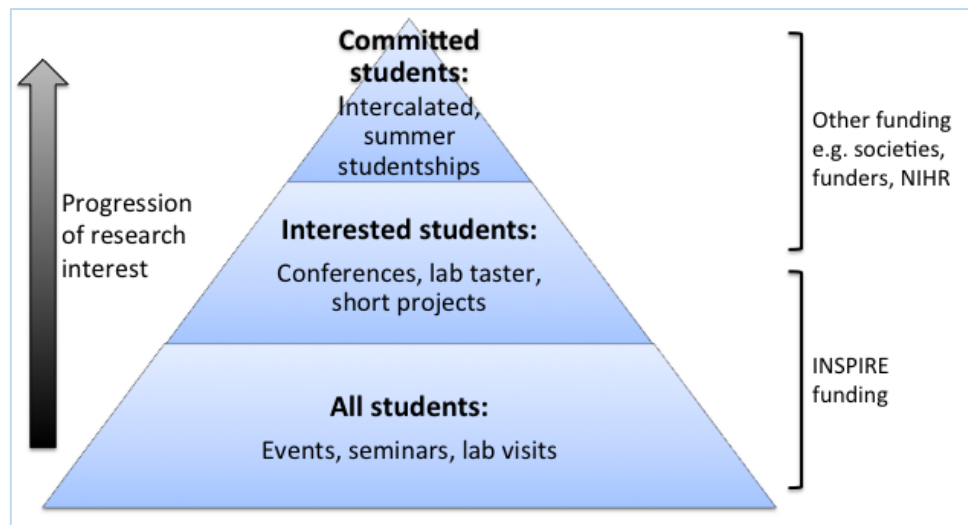


Figure 1 Potential partnership working

Key findings

Impact

- This evaluation reports that INSPIRE has had a significant impact on medical undergraduates considering a research career. Since veterinary and dental schools have only joined relatively recently, further follow up will be required to track impacts within these cohorts.
- Survey, reports and interviews evidence that INSPIRE has contributed to building student interest in research through local events and initiatives and that INSPIRE has successfully 'inspired' a large number of students to consider a career in academic medicine:
 - 82% of survey respondents fed back that INSPIRE has increased their interest in research as a career option
 - More than 40% of respondents said that their exposure to research throughout their degree was all or mostly attributable to INSPIRE
 - Students who were involved in INSPIRE activities reported to have had more exposure to research than students who were not involved in INSPIRE activities
- INSPIRE also acts as a key driver of extracurricular activities in medical, dental and veterinary students, for example student-led conferences, seminar and networking events.
- INSPIRE has contributed to embedding research within the ethos of many schools, providing valuable experiences for students to consider an academic career. This is reflected at numerous INSPIRE schools who have made changes to their curriculum to include modules on research skills.
- Schools participating in the INSPIRE scheme also report that emphasising their offer of research engagement helps them to attract the best medical students. One school also explained that the scheme enables more senior clinical academics to develop young researchers and build teams around them to progress their research programmes.
- INSPIRE Leads view the scheme as being absolutely essential to the future of academic UK medicine. INSPIRE funds act as an important lever and have unlocked in-kind contributions from medical, dental and veterinary schools. Clinical Academics represent a vitally important

part of the biomedical research community and schemes such as INSPIRE are critical to nurturing this talent.

Funding and Sustainability

- Continued effort and funding at current levels are required to maintain student engagement at a sustainable level. Without such support, deaneries would lose interest and activity would decline.
- Whilst schools have provided funding in kind, few locations have ventured beyond this source to obtain external funding. There may be scope for other funders such as NIHR, medical research charities or clinical specialty societies to partner downstream of INSPIRE's core domain by providing support for more costly activities such as studentships and placements.
- All medical schools are required, by the GMC, to promote research engagement as part of the undergraduate curriculum. In practice, there would appear to be variation across the schools in how this requirement is fulfilled. The Academy has an important role to play in facilitating research engagement – through its support for INSPIRE – however the overall responsibility for effective engagement lies with individual medical, dental and veterinary schools.

Research Landscape

- The INSPIRE scheme fulfils an important and unique place in the UK landscape for early career clinical academic training. It offers opportunities for all students to engage in research, whether as an early experience such as attending a seminar or visiting a lab, or at a more advanced stage such as carrying out a research project. It also highlights to all students the importance of research and the opportunities for considering a clinical academic career. For many schools, there were few opportunities to engage students in research prior to INSPIRE.
- The National Student Association of Medical Research (NSAMR), supported by the Wellcome Trust also aims to foster medical research amongst UK medical students. Working as a 'grassroots' organisation, it delivers a wide range of engagement activities through coordination of medical student research societies across the UK.

National Coordination and Collaboration

- Medical Schools have developed valuable schemes through INSPIRE support, however in many cases student access can be limited to the particular school. More needs to be done to promote high quality, collaborative partnerships between schools and other local/regional/national organisations. This involves improved communication and sharing of activities and best practice between schools and student societies, for example through INSPIRE workshops/newsletters.
- Whilst the approaches of INSPIRE and NSAMR were considered to be somewhat complementary, overlap exists and the landscape would benefit from improved communication and coordination between the respective organisers. Closer working between INSPIRE and NSAMR would also help to improve the coordination and sharing of student engagement activities across the UK and could facilitate the rolling out of successful INSPIRE pilots to other schools across the country.

Special Projects

- Nine Special Project Grants have been made to support innovative projects at medical, dental and veterinary schools.
- In many cases, grant funding has been used to improve collaboration across medical schools and enable students to engage with fellow students, as well as senior researchers from other schools through conferences, studentships or the development of an online platform. For example:
 - The 'CURES' project provided 15 students with the opportunity to pursue their research ambitions at centres of research excellence across Scotland.
 - Establishing the 'medidem³' database to connect medical students with research projects across the UK.
- The majority of grant recipients can evidence high levels of student engagement and many projects continue to be independently supported by medical schools and/or external funders.
- In comparison to the small grants, a key achievement of the Special Project Grants is the comparatively high engagement of dental students through the special project grant awarded to King's College London Dental Institute to run a conference for dental students.

Awareness and Recognition

- Academic Leads consider the INSPIRE scheme as being a recognisable brand and umbrella for research engagement activities. According to interviews, the brand is closely associated with the Wellcome Trust and the Academy of Medical Sciences, adding to its excellent reputation and prestige. Among medical students participating in our survey, 63% of respondents had heard about INSPIRE.
- Furthermore, ongoing involvement from the Academy is also important for raising its own profile with students, important for future engagement with clinical academics.
- There could also be a stronger presence from the Academy at the annual NSAMR conference, which would help raise the profile of the Academy with medical students.

Programme Management

- Funding for INSPIRE should be released to schools on a more regular basis e.g. annually or for a longer term. Funding in this manner would help to support the sustainability of INSPIRE activities.
- Feedback should be provided to INSPIRE Leads and students describing the overall outcomes from INSPIRE and progress towards meeting the programme's goals.

³ www.medidem.ac.uk

3. Background and Objectives

3.1. Background

INSPIRE is a UK-wide initiative designed to engage medical, dental and veterinary undergraduates with research. It consists of three core elements:

- ‘Small grant awards’ open to all UK medical schools (recognised by the GMC) and all UK dental and veterinary schools offering grants of up to £10,000 for INSPIRE focused activities.
- A ‘special project fund’ for schools to pilot or expand/develop particularly innovative projects.
- A series of workshops hosted by the Academy for schools to showcase their activities, share learning and develop new ideas.

INSPIRE began in 2013, with £1m in funding from the Wellcome Trust. The scheme is open to all medical and dental schools, and since 2016 veterinary schools. INSPIRE aims to expose medical, dental and veterinary students to research at a very early stage in their careers, and as such, gives schools flexibility in how they use funds.

Since the launch of INSPIRE, the Academy has awarded 58 small grants and a further nine special project grants⁴. The small grants of £10,000 over two years were awarded in three tranches, reaching 31 schools in the first round in December 2012, 21 schools in December 2014 and another six schools in 2016⁵.

Schools have flexibility in how they use funds. Consequently, variation exists between the schools from developing events with broad engagement to supporting research projects for individual students. Academic leads from each school work closely with student representatives to plan activities, apply for funding and lead delivery, in most cases with an administrative lead in support.

3.2. Objectives of INSPIRE

The INSPIRE programme aims to:

- Inspire medical, veterinary and dental undergraduates to consider a research career.
- Build student interest in research through innovative and proven initiatives.
- Encourage student involvement: the experiences and needs of local students should inform the development of the local INSPIRE programme.
- Promote high quality, collaborative partnerships between members of faculty and students, and between schools and other local/regional/national organisations.
- Strengthen local, regional and national student research networks, sharing experiences and resources.
- Foster a research culture in all clinicians entering the NHS, not just those with an interest in pursuing a career in academic medicine. Likewise, INSPIRE aims to foster a research culture in all veterinary graduates.

⁴ See chapter 6 for a detailed analysis of the outcomes of the special project grants.

⁵ Please note that the last round of small grants only lasted 1 year.

3.3. Aims and scope of the evaluation

The objectives of this evaluation are:

1. What has INSPIRE achieved? An evaluation of the impact of the scheme, using relevant proxies given that the scheme has only been running for 3-4 years.
2. A description of the key challenges experienced locally to deliver INSPIRE projects.
3. A description of how INSPIRE fits in the clinical academic training environment considering potential gaps and overlaps with other schemes run nationally (e.g. NSAMR) or by individual medical schools.
4. Recommendations for the future of the INSPIRE scheme, describing how it can maintain relevancy and develop impact.

4. Achievements of INSPIRE since 2013⁶

Outputs of the INSPIRE grant are captured in end of grant reports submitted by each grant recipient to the Academy. This chapter summarises the key achievements of INSPIRE based on these reports and interviews with local INSPIRE leads. A high level analysis of activities shows that more than 75% of schools used INSPIRE funding to support conferences, showcase events and student presentations. Another two thirds of schools explicitly mention the strong links between INSPIRE and their local student groups and societies which, in most cases, are the key drivers to engage medical students across year groups. The third most common activity was the support of studentships or student-led research projects with more than 50% of schools reporting on successful initiatives in their reports (see Figure 2).

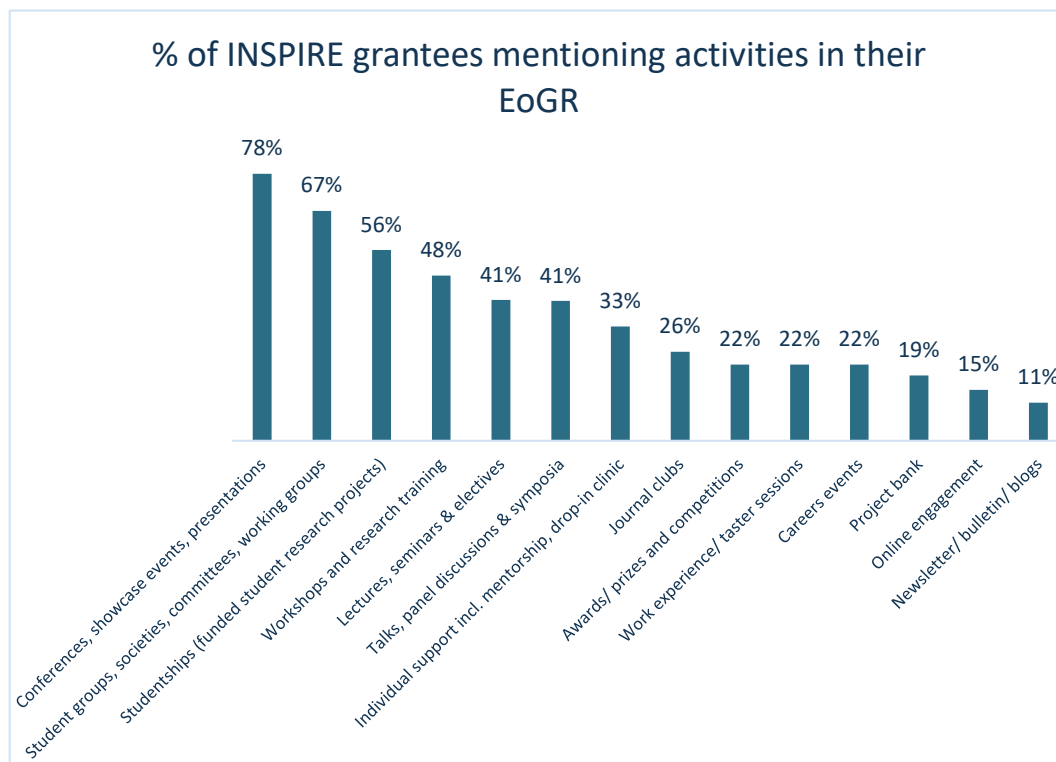


Figure 2 Breakdown of INSPIRE activities and % of schools that mentioned these activities in their End of Grant reports

The following chapter provides a more granular assessment of the impact of these activities on students' exposure to research, including examples from different schools.

Personal Funding for students

The INSPIRE grant has had a wide range of impacts on the schools and students that have benefited from it. In funding a portfolio of activities and studentships, most schools have leveraged further funding from other sources, including the university's medical and dental schools. In particular, Bart's, Birmingham and Keele have received significant matched funding for studentships from their medical and dental schools as a result of winning the INSPIRE grant. Other schools offer financial support for a wider range of activities, such as research based special student modules and electives

⁶ The following chapter is largely based on an analysis of the grant reports submitted by the schools. Table 7 in Appendix I: Summary table – Grant reports of this report provides an overview of the reports analysed.

(Oxford). St Andrews also fund students to attend external research events, such as a research autopsy in Edinburgh.

In addition to funding studentships directly, INSPIRE funding has also contributed towards financial awards and grants, given to students who participate in conferences and who publish academic papers (Brighton & Sussex; Bristol; Keele; UCL). For example, Brighton and Sussex give prizes for the best independent research projects, and Glasgow hosts a Research Prize Night to encourage students to produce concrete outputs from their research projects. Newcastle also funds competitive scholarships for research electives. This tactic appears to be successful, with high turnouts for conferences and awards events showing significant student engagement on this front.

Academic support

To support students in producing high quality outputs, such as publishable work, and in feeling confident to present their work to others, many schools have opted to provide their students with significant additional academic support and guidance around research.

In particular, Brighton & Sussex provide support for individuals who want to publish papers, present papers at conferences, or participate in the Brighton Science Festival. They also have used INSPIRE funding to set up a 'clinic' to give students the opportunity to discuss research ideas and issues. Some schools take a different approach, providing a more ongoing mentorship, along with logistical support and research advocacy work to support those students who are interested in research (Glasgow; Liverpool; Norwich; Southampton). According to reports and interviews, this support has precipitated in a "10-fold increase in the number of students who undertake an intercalated degree" in Norwich and triggered an increase in the number of students intercalating by nearly 40% in comparison to 2010 (Exeter).

Bart's takes a different approach still, by identifying a core group of 'promising' students who are interested in clinical academia, and providing a research-focused module to support them in achieving their ambitions.

Changes in curriculum

Making changes to the curriculum is a common theme that has emerged from the end of grant reports. This has been implemented in a variety of ways across the different medical and dental schools. Some have added lecture series focused on research (Brighton & Sussex; Hull & York; Liverpool; Manchester; Nottingham; Exeter), which have often proved to be highly popular. Others have added compulsory INSPIRE sessions, bringing in clinical academics to give talks (Bristol).

Workshops have proved a popular method for engaging students in research (Liverpool; Warwick). Glasgow, for example, utilises the enthusiasm of academic clinical trainees to teach undergraduates basic research skills through a workshop format. Bristol and Glasgow have also added research student selected components into the curriculum, enabling students to develop concrete research skills as part of their core course.

In Liverpool, the changes in curriculum, developed through the INSPIRE programme, have culminated in the 're-launch' of their intercalated MRes programme. Other schools, for example Bristol and Cambridge, have also changed their curriculum to integrate research blocks and core training in research skills. The hope across many of these curriculum innovations is to ensure that students gain the necessary skills to enable them to follow a career in clinical academia. Interview partners reported that early successes of these curriculum changes can be evidenced by an

increased interest of medical students in research-focused elective components in years four and five.

In addition to formal changes to the curriculum, many schools provide optional extra-curricular activities, aimed at giving students the skills they need in the research field. For example, some schools host journal clubs, to enable students to become more familiar with academic literature (Glasgow; Bart's; Exeter). Evening talks and symposia are also a common theme that has emerged from the reports. Southampton is an example of a school that has focused heavily on this aspect of engagement, putting on at least five, well-attended evening events. They feel that this highlights the importance of evidence-based medicine and helps to break down negative perceptions of research.

Opportunities to participate

Many respondents noted that the INSPIRE programmes have increased awareness, accessibility and quality of research opportunities for students. Many schools have studentships available to attract students into research (see Table 8), with strong interest for places to teach students about competing for research grants. These studentships come under several guises, with Nottingham starting the LINK Initiative to encourage medical students to take on research projects with a designated supervisor. Some schools have improved both the quantity of projects and the accessibility of the studentships by encouraging staff to host projects, and by holding project information on a database for students (Edinburgh).

Other research opportunities include the chance to participate in conferences and to present research outputs to peers and academics. This has most commonly been realised through attendance, presentations and posters at conferences and showcase events, at both the local and national level (Brighton & Sussex; Keele; Leeds; Manchester; Norwich; Nottingham; St George's; Warwick). In addition to presenting their research at these events, students can also hear talks by specialist researchers and learn to network with peers and others, providing a strong platform for future collaboration.

Finally, work experience has featured in the INSPIRE programmes, particularly in the South West. For example, INSPIRE has enabled Bristol, Exeter, Cardiff and Plymouth to introduce 'taster sessions' where students can spend half a day with the research group of their choice from across the region, opening a new pathway to research. This strong collaboration between the four schools in the South West is further discussed below. In addition, Swansea has established LORS (Learning Opportunities in Research Setting), a student selected programme which offers students half day research experiences.

Collaboration

Generally, INSPIRE programmes have enhanced engagement between different groups, including students, academic societies, clinical academic trainees and senior researchers. This has been achieved in many instances through a close collaboration with existing student networks such as the student research network (Brighton & Sussex), the National Pathology Students Society (Leeds), the Clinical Research Society (Cambridge) and NSAMR (Hull & York; Brighton & Sussex; Birmingham). UCL also commented on the importance of strong student-faculty links "to facilitate and drive the programme". The benefits of these collaborations were exemplified in Newcastle, where the INSPIRE academic team worked alongside the student-led Academic Medical Society to organise an annual research week, resulting in increased awareness and better research opportunities for students.

There are also inter-institutional collaborations between student societies. For example, St Andrews and Dundee held an inter-institutional student research conference where students from both schools presented research. Southampton also had attendees from Manchester, Bristol and Oxford attend their National Undergraduate Cancer Research Conference. The INSPIRE East Midlands Medical Student Research Conference is another example, with attendees from Leicester, Nottingham, East Anglia and Sheffield.

One large scale collaboration that emerged from the INSPIRE programme is between Bristol, Cardiff, Exeter & Plymouth. They have formed a collaboration that combines the expertise from each of these schools, co-ordinates activities and enables students to connect with researchers from across the region. It fosters innovation and new ways of working (e.g. proposals for workshops, a virtual conference and a student-led eMagazine). Thirty-six per cent of Cardiff students do a project outside Cardiff as a result of the collaboration. They also noted that the regular teleconferences between the four schools encouraged each of them to maintain progress and proved valuable for brainstorming and idea sharing.

Use of technology

Online engagement has formed another key trait of some of the INSPIRE programmes. This has mainly been focused around creating a central bank of projects for students to access. For example, Edinburgh created an online portal, which connects the students' virtual learning environment with the Edinburgh Research Explorer, which contains summaries of research staff, projects, activities and outputs. Over 6000 views and at least 12 confirmed projects demonstrates that students are keen to use the hub. Imperial have had similar success through their online hub (Project Pal), with 1,357 views and 86 project applications leading to 5 peer-reviewed articles and 14 national conference presentations. In addition to the project bank, Southampton have created a website with research-related news and resources.

Oxford noted that one barrier to students undertaking research was the lack of a central database of research opportunities, specifically projects open to students throughout their undergraduate degree. They now plan to develop a web-based platform to address this issue.

Imperial have used technology in a particularly innovative way, engaging students and staff in online knowledge creation by hosting a Wikki Hackathon which 18 students attended.

Student involvement

Student involvement in the design and delivery of the INSPIRE programmes was mentioned as a key part of INSPIRE in most reports. Some schools talked about the contribution of student societies and research groups through the events that they organise (Keele Medical Research Society; Manchester Medical Research Student Society; SUPRA; Oxford Translational Medicine for Students). From organising conferences and talks to regular meetings and journal clubs, student societies are driving activity in many of the responding schools.

In Imperial, Norwich, and Swansea, the INSPIRE funding has contributed directly to the establishment of student-led research societies, which host a range of activities, including conferences, career events, lecture series, journal clubs, workshops and talks. Norwich, UCL and Newcastle particularly commented on the importance of student-led activities in encouraging student engagement.

Other schools explained how they have brought students into the design and delivery of the INSPIRE programmes in a more active way. In Edinburgh, students supported the development of the online platform by testing the Hub before it went live. Liverpool involves its students in the design and

refinement of their new 'research and scholastic theme' within the new curriculum. Manchester are even creating new online platforms for students to express their views and participate in planning/ decision-making.

Bristol takes a different approach still, having appointed 12 INSPIRE representatives including students and senior academics to engage more students and help direct the organisation of activities. Not all schools comment on the involvement of their students in the design and delivery of their INSPIRE programme, potentially indicating the need to include this as an explicit question within the end of grant reporting forms.

External Funding

Many schools had been successful in securing in-kind contributions from within the school and also external funding sources. Examples include:

- The Royal College of Physicians and Surgeons of Glasgow (RCPSG) had provided the venue for an event. This engagement had also led to inviting students to educational days run by the college.
- The Pathological Society had provide support for activities in Leeds.
- Bristol, in partnership with other vet schools, had obtained funding for more studentships from the BBSRC's STARS scheme. This provided support of £2500 for 10 week placements.
- Bart's have leveraged the INSPIRE funding to access £25,000 from an independent endowment within the school, to fund a total of 300 weeks of summer studentships for c. 50 students.

5. Challenges faced by INSPIRE programmes

Administration

Administrators have been cited as having a critical role in supporting staff and students through the INSPIRE programmes, as well as in capturing the metrics and information required to communicate the programme to funders and the public (Birmingham; Bristol; Bart's; Cardiff; Liverpool). The partnership of Bristol, Exeter, Cardiff and Plymouth in the South West in particular had difficulties with coordinating their taster sessions and have recognised the need for dedicated administrative support to ensure the programme runs smoothly and effectively as it grows. Cardiff also noted the need for the programme to be embedded in the main stream curriculum administration to ensure a "joined up" programme. Others mentioned the need for project and student data to be centrally collected (Hull & York).

Swansea has faced significant challenges of continuity of leadership within the INSPIRE programme, with multiple managing staff leaving the school over the course of the grant. This struggle underscores the importance of strong and consistent administration for a successful INSPIRE programme.

Monitoring outputs from the INSPIRE programme emerged as another challenge across schools. Across the breadth of activities and the variation with regards to the level of student engagement (e.g. student attendance at a conference to summer studentships), interviewees felt that it was difficult to capture the overall impact of INSPIRE for reporting purposes.

Engagement⁷

Engaging both staff and students appeared as a challenge for a number of schools within the INSPIRE programme. Bristol acknowledged that although their medical students were keen to engage with research, the opportunities to do so needed to work around their timetables and exams. Aberdeen also felt that most of their students could be inspired to engage in academic research, given the right guidance and support. Others had more difficulty, with Swansea commenting on the challenge of engaging students without a compulsory research requirement.

Early communication was cited as a key way to galvanize student involvement, to enable sufficient time for students to develop their interest in an area, and to ensure continuity of student-led projects (Birmingham; Leeds; Imperial). Successional planning was mentioned by Norwich as crucial to maintain momentum across years. This was especially important for some schools who saw the majority of interested students coming from senior medical students (Liverpool). Other schools noted the challenge associated with mobilising students who are located across several sites, and for activities which are not compulsory. Consistency and regularity of communication were also raised by Manchester as key to maintaining interest and engagement.

Glasgow recognised the need to select workshop trainees and mentors carefully to harness their commitment and enthusiasm as much as possible. Others felt that focusing on academic leaders was key to supporting the success of the INSPIRE programmes (Birmingham). In general, buy in from students and staff was evidently a key factor in making projects, taster days and studentships a success (Imperial, and many others).

⁷ For additional information on the levels of engagement, please see Table 3.

Although many schools recognised the importance of being student-led, Norwich also commented on the need for “academic leads to meet regularly with [student] representatives to maintain oversight over organisation and budgets”. This need to provide adequate support, in whatever form that takes, has been recognised by several schools (Warwick).

St George’s faced the greatest challenge and was unable to garner enough interest in their student society to fill the existing committee positions. From this, they recognise the need to organise more formal events to promote the roles, to elicit input from students on what they want from membership of the society, and to develop activities that promote leadership skills.

Many INSPIRE leads reported that it has been difficult to get the same level of engagement from dental and medical students. To encourage more dental students to participate in INSPIRE activities, Exeter has now recruited a dental student representative to their INSPIRE board which oversees INSPIRE activities.⁸

Case study - Engagement of dental students
Exeter & Plymouth

A key challenge across the INSPIRE activities is the engagement of dental students. To address this issue, the INSPIRE Leads have appointed research student INSPIRE ambassadors in Years 1 and 2 of the medical and the dental student cohorts in both Exeter and Plymouth. This was established with a view to ensure continuity as students move through both schools.

In addition, the INSPIRE activities have helped to promote research in the Dental School in Plymouth leading to the addition of an intercalated MSc at the Plymouth Dental Surgery. This course is based on the MSc in Biomedical Sciences and 4-5 places will be available for 4th year dental undergraduates.

⁸ The student survey confirms the relatively low level of engagement of dental students: only one dental students participated in the survey.

6. Key findings from interviews and surveys

To inform this evaluation, medical, dental and veterinary students⁹ were invited to participate in an online survey. The survey focused on three main areas: INSPIRE programme involvement, exposure to research and post-graduation plans. To account for participants' different levels of engagement with and knowledge of INSPIRE, survey questions followed a skip logic. The survey was distributed by local INSPIRE Leads and administrators. In addition, interviews were held with a selection of INSPIRE Leads from participating schools.

Overall Perception

The viewpoints from INSPIRE leads and evidence from the survey report good progress in engaging medical students in research. INSPIRE has contributed to embedding research within the ethos of many schools, providing valuable experiences for students to consider an academic career. However continued effort and funding is required to maintain student engagement at a sustainable level.

INSPIRE leads viewed the scheme as being absolutely essential to the future of academic UK medicine, with one Lead explaining that they would be “devastated” if future funding was not available. Clinical Academics represent a vitally important part of the biomedical research community and schemes such as INSPIRE are critical to nurturing this talent. There were some questions about the relationship between INSPIRE and NSAMR – this topic is discussed further below.

In most locations, the INSPIRE scheme is seen by most Academic Leads as being a recognisable brand and umbrella for research engagement activities. However, as shown in the survey below, 37% of respondents had not heard about INSPIRE.

Outcomes

Interviewees reported the local impact of INSPIRE to be considerable, galvanising previous activities into a robust engagement programme. For many schools, there were few opportunities to engage students in research prior to INSPIRE. This is particularly true for smaller, less well-endowed and traditionally less research-intensive universities. The funding awarded from INSPIRE, and that available in kind from the school, has significantly increased capacity for organising and holding research engagement activities. These activities have raised the profile of medical research opportunities and academic careers for students.

In addition, the INSPIRE special project grant funding has enabled new partnerships between medical schools with a view to develop innovative ideas that engage students with research. The collaborations that have emerged out of these grants, e.g. the launch of an online platform to connect researchers and students across the country, have helped to promote research among medical and dental students and most grantees are committed to continuing their projects in the future.

Schools participating in the INSPIRE scheme also report that emphasising their offer of research engagement provides additional benefits in helping them to attract the best medical students. According to senior clinical academics who were interviewed for this evaluation, the scheme has also helped Group Leaders to develop young researchers and engage medical students in their research teams at an early stage.

⁹ The survey for veterinary students was only shared with students from the University of Bristol.

Postgraduate academic medical training

Several schools described how INSPIRE feeds into local postgraduate clinical academic pathways. For example, INSPIRE enables research experience such as placements or studentships, making stronger candidates for entry to the Academic Foundation Programme (AFP). In particular, one school explained that increasingly, candidates for the AFP already have research experience when they apply, which was not the case 4-5 years ago. They believe that this is directly attributable to INSPIRE.

Engagement with students

Most Leads described an overall approach that sought to engage, empower and trust students to develop INSPIRE activities e.g. choosing journal club topics or speakers, with support and facilitation from academic staff. This 'bottom up' approach relies on the enthusiasm of student leaders to get involved and drive activities.

One interviewee noted that such natural leaders are not forthcoming every year, in which case a more 'top-down' involvement from the academic lead is required. Keeping year-on-year activity and enthusiasm from students is important. Furthermore, there is also a need for the sustained engagement from mid-career and senior academics to be available to talk with and enthuse students.

Survey respondents

470 students from 29 different medical and dental schools responded to the survey. As shown in Table 1 below, there was a disproportionately high representation of students from the South West, Scotland and the South East, and a slight under-representation of students from London and Northern Ireland. There were no responses from Norwich Medical School, Queen's University of Belfast, St George's University of London and the University of Oxford.

Table 1 Survey respondents by home university¹⁰

	Survey			UK student population ¹¹	
	# of med schools	# of students	% of all respondents	Total # of students	in %
South West	2	109	23%	2,430	6%
Scotland	5	88	19%	4,976	12%
South East	3	86	18%	2,925	7%
Yorks & Humber	3	43	9%	3,529	9%
North West	2	40	9%	4,166	10%
London	6	36	8%	9,219	23%
West Midlands	3	21	4%	3,320	8%
East Midlands	2	19	4%	2,797	7%
East of England	2	14	3%	2,169	5%
Wales	2	13	3%	1,837	5%
North East	1	1	0%	1,768	4%
Northern Ireland	--	--	0%	1,355	3%

¹⁰ For a breakdown of respondents by university, please see Table 3.

¹¹ See General Medical Council (GMC) report The State of Medical Education and Practice in the UK (SoMEP) 2015. Numbers based on Medical School Annual Returns.

Table 2 provides a breakdown of respondents based on their current year of study. To get a better understanding of the reach and impact of INSPIRE by year group, we have clustered survey respondents into five groups:

Table 2 Survey respondents by year of study

Group name	Respondent characteristics	# of respondents
Yr1&Yr2	Year 1 and Year 2 students	101
Yr3&Yr4	Year 3 and Year 4 students	231
Yr5&Yr6	Year 5 and Year 6 students	61
Intercalated	Students of intercalated medical and dental courses	39
Post MB / Intercalated BSc	Academic Foundation year 1 and 2, students in specialist training, PhD programme	38
Total		470

As shown in Figure 3, a slightly higher proportion of women replied to the survey: 219 respondents (47%) were female, 164 (35%) male and 5 preferred not to reveal their gender.¹²

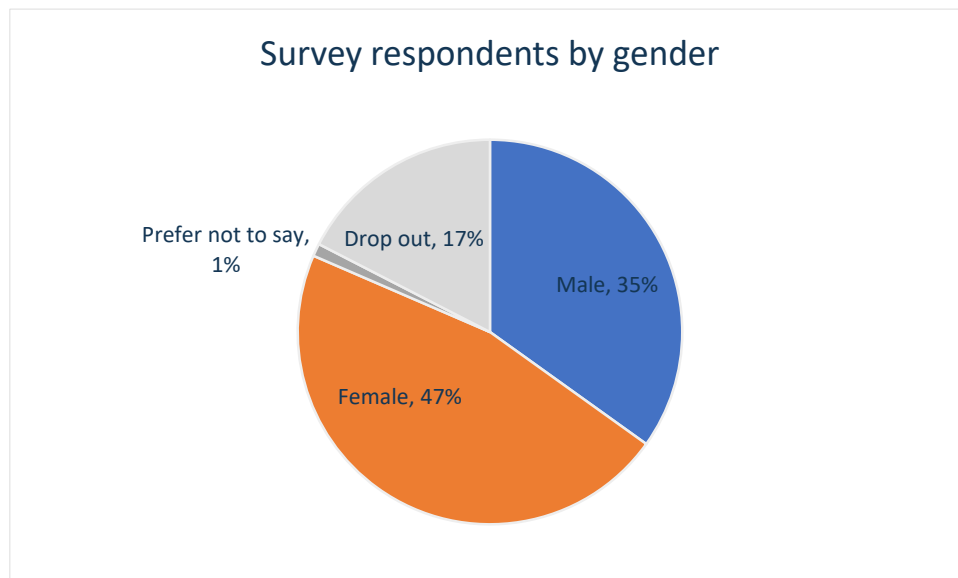


Figure 3 Breakdown of survey respondents by gender

Awareness of INSPIRE

Out of all survey respondents, 63% (296) had heard of the activities supported by INSPIRE at their schools – a proxy for the strength of the INSPIRE brand. However, as shown in Table 3 there are significant variations with regards to the relative levels of awareness and engagements by school. In relation to the number of survey respondents per school, the highest levels of awareness of INSPIRE were at Hull & York, Exeter and Manchester. The lowest levels of awareness according to the survey were at Liverpool, Imperial and Bart’s (highlighted in orange).

¹² The drop out rate refers to survey participants who did not proceed with the equality and diversity monitoring questions.

Table 3 Levels of awareness and engagement by school

	Total # of respondents	Awareness level		Engagement level	
		# of respondents who have heard of INSPIRE	In % of total respondents	# of respondents involved in activities	In % of total respondents
University of Dundee	54	42	78%	27	50%
Plymouth University	49	44	90%	19	39%
Brighton and Sussex Medical School	46	11	24%	3	7%
University of Bristol	41	36	88%	23	56%
University of Southampton	40	31	78%	14	35%
Hull-York Medical School	28	27	96%	14	50%
University of Edinburgh	25	5	20%	3	12%
University of Liverpool	24	0	0%	0	0%
University of Exeter Medical School	19	18	95%	12	63%
University of Leicester	18	14	78%	10	56%
Bart's and The London, Queen Mary's School of Medicine and Dentistry	16	1	6%	1	6%
University of Manchester	16	15	94%	12	75%
University of Cambridge	14	10	71%	7	50%
University of Leeds	13	12	92%	12	92%
Cardiff University	12	6	50%	4	33%
Keele University	12	10	83%	4	33%
University of Birmingham	8	3	38%	1	13%
Imperial College London	8	0	0%	0	0%
King's College London	7	3	43%	0	0%
University of Aberdeen	6	1	17%	1	17%
University College London	4	1	25%	1	25%
University of Glasgow	2	2	100%	2	100%
University of Sheffield	2	2	100%	2	100%
King's College London - Dental School	1	1	100%	1	100%
University of St Andrew's	1	0	0%	0	0%
University of Warwick	1	1	100%	1	100%
Swansea University	1	0	0%	0	0%
University of Nottingham	1	1	100%	1	100%
Newcastle University	1	1	100%	1	100%
Total	470	298	63%	176	37%

Broken down by year group (see Figure 4), students in Years 1 and 2 seem to have a slightly higher awareness of INSPIRE: only 27% of all survey respondents in Year 1 and 2 indicated that they had not previously heard of the scheme. Students in years 5 and 6 of their degree had the relatively lowest level of awareness: just over 50% of them were aware of INSPIRE.

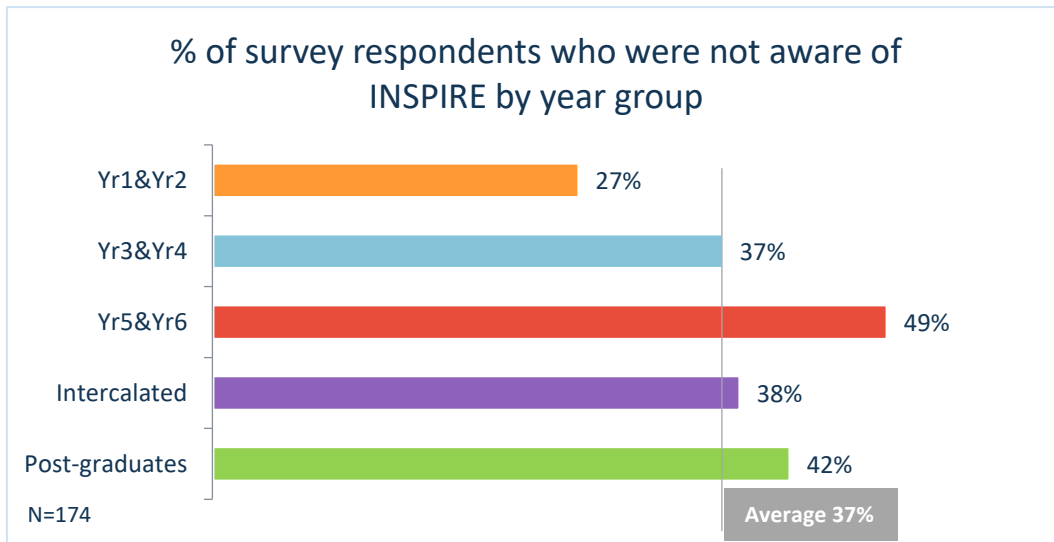


Figure 4 Percentage of respondents per year group who were not aware of INSPIRE

Out of the 176 survey respondents who were involved in INSPIRE activities, 52 (31%) were actively involved in the design of the activities. In relation to the number of respondents from each school, the highest level of student engagement in INSPIRE activity design was at Edinburgh, Southampton and Manchester.¹³ Student engagement mainly takes the form of support with the organisation of conferences and events (47%) or taking on the role as the student lead / student representative (32%).

While the overall awareness of INSPIRE is high, the engagement level, measured by the number of students involved in INSPIRE activities is slightly lower. Across all survey respondents only 37% (176) were involved with INSPIRE activities.¹⁴ This is equivalent to 59% of those students who are aware of INSPIRE activities. As shown in Table 3 above, there is a strong link between the level of awareness and the level of student engagement: both, Manchester and Exeter also exhibit very high degrees of student involvement.

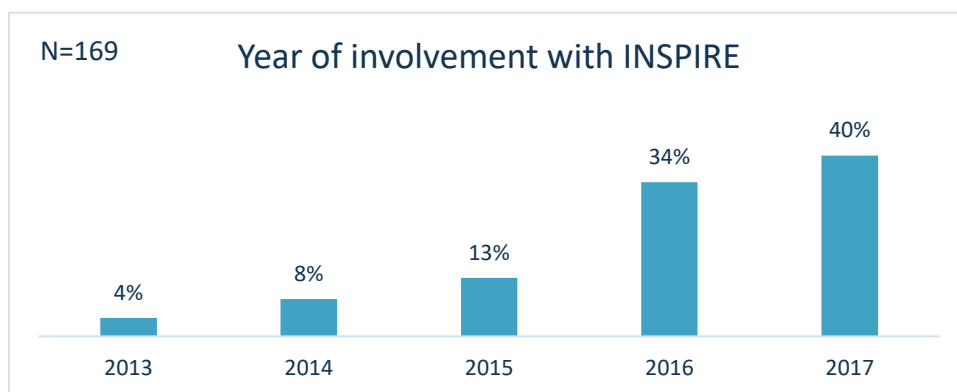


Figure 5 Involvement with INSPIRE

¹³ This ranking does not take into account those survey responses where there was only one survey respondent per school.

¹⁴ As shown in the Appendix, the survey questions were slightly different for survey participants who were involved in INSPIRE activities and the remaining students. A subset of 52 students was involved in the design of INSPIRE activities, mainly INSPIRE events/conferences, organisation of taster days and as a student lead or representative.

Figure 5 shows that most respondents were involved with INSPIRE in the last two years. The high degree of survey respondent's involvement in INSPIRE in 2016 and 2017 (Figure 5) correlates with the higher degree of awareness recorded from Year 1 and Year 2 students (Figure 4).

Impact of INSPIRE

To understand the impact of INSPIRE, we asked survey participants to rank the level of exposure to research that they have had through different means. We have grouped the results based on students' awareness of and engagement with INSPIRE. As shown in Figure 6, the group of survey respondents who were aware of and involved with INSPIRE (n=155) had more exposure to research in all three categories, from engagement events and practical research experience to reading research literature than both other groups. Students who were not aware of INSPIRE and consequently had also not been involved with the scheme (n=139) had significantly less exposure to research through engagement events.

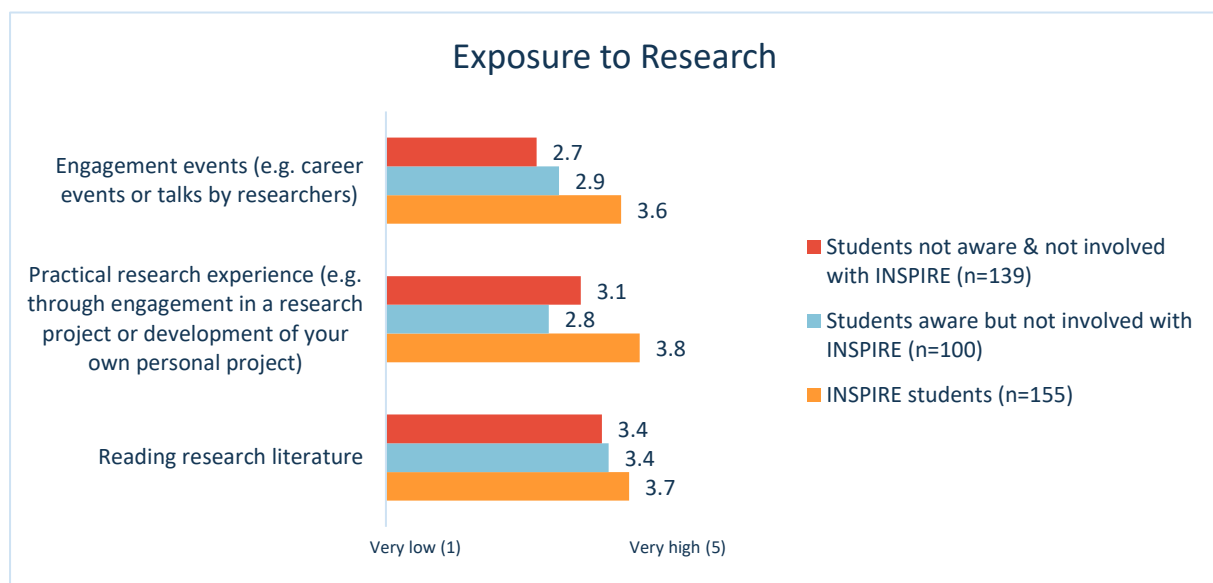


Figure 6 Exposure to Research – Medical and Dental students (1=Very low, 5=Very high)

When asked how much of their exposure INSPIRE students would attribute to INSPIRE, more than 40% of respondents said it was all or mostly attributable to INSPIRE. More specifically there was a very strong perception that INSPIRE helped students to understand career opportunities in research (see Figure 7).

Outside of INSPIRE, the key activities and events mentioned by survey respondents to gain exposure to research are:

- Research collaborative groups
- Reviewing submitted manuscripts
- Intercalated Degrees (BSc and PhD)
- Attendance and presentation at conferences
- Previous employment (e.g. as a research assistant) / previous degrees
- Workshops, student conferences, student-led research events
- Academic skills workshop, Statistics workshop
- Undergraduate research journals
- Tutorials and lectures for undergraduate students
- Taking part in a clinical trial

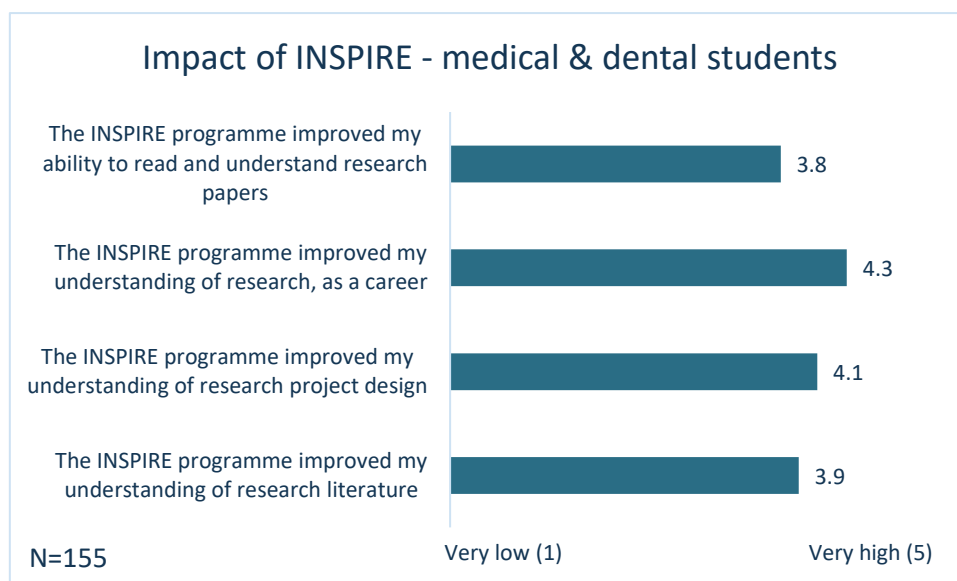


Figure 7 Impact of INSPIRE

Post-graduation plans

One of the INSPIRE programme aims is to encourage students to consider a career in research. According to the survey, 46% (71) of students who were involved in INSPIRE activities feel “a lot more” interested in research as a career option, and another 36% (56) feel “a little bit more” interested. Only 18% of respondents from the group of INSPIRE students reported that the scheme has had a little or no impact on their interest in research as a career option.

Across both groups, INSPIRE and non-INSPIRE students, 98.5% of survey respondents indicated that they were planning to complete clinical training after graduation. As shown in Table 4 there are no significant differences in the clinical career ambition between students who were involved and students who were not involved in INSPIRE activities, and students based on their current year group.

Table 4 Post-graduation plans medical & dental students

Do you plan to complete clinical training after graduating?	INSPIRE students	Non-INSPIRE students
Yes	152 (99%)	235 (98%)
No	1 (1%)	5 (2%)
If no, what are you planning to do?	Med. Research	Further Edu. Med. Research GP

	Yr1&Yr2	Yr3&Yr4	Yr5&Yr6	Intercalated	Post-graduation
Yes	80 (78%)	195 (85%)	53 (87%)	37 (95%)	22 (58%)
No	1 (1%)	2 (1%)	1 (2%)	--	2 (5%)
Drop-out	21 (21%)	33 (14%)	7 (11%)	2 (5%)	14 (37%)
Total	102	230	61	39	38

Case Study – University of Manchester

The Manchester Medical Research Student Society (MMRSsoc) is the key driver of INSPIRE activities at the University of Manchester. MMRSsoc is the only student-led organisation working primarily to foster a research culture amongst undergraduate medical and dental students and seeks to inform students of fundamental academic principles like the clinical relevance of research, core academic skills and topical areas within academic medicine.

INSPIRE funding has been a key driver of the society's activities which included:

- An inaugural national conference for undergraduate students to learn and network, providing an outlet for future collaboration with different research societies with 58 attendees

“Several students that presented at our conference have now been published in the NSAMR journal as a result, which we are very proud of and this could not have been possible without the INSPIRE grant.”

- A British Undergraduate Dental Research Conference open to all dental schools across the UK which included a diverse range of workshops for example to improve performance at DF1 interviews and refine core skills like suturing
- Several educational lecture series to explain key research processes and career options, e.g. ‘Intercalation, is it for me?’ or ‘Clinical Application of Audits’
- Two ‘INSPIRE lectures’ which aim to convey the relevance of medical research to current clinical practice

“Attending the MMRSsoc event and speaking to more senior students there convinced myself to intercalate during my medical degree”

- A RARE Diseases Research Symposium which was organized in collaboration with RARE Disease UK and attracted approximately 80 attendees
- A competition for 6th form students which led to 28 6th form students experiencing a university day with access to medical students and doctors/researchers, lectures and a dedicated workshop series
- Development of a Research Placement Database to facilitate student involvement in academic activities

16 medical students from Manchester participated in our survey and 93% (15) of them had previously heard of INSPIRE. This is significantly higher when compared to an overall level of awareness of 67%. Similarly, the rate of survey respondents who were involved in INSPIRE was higher in Manchester at 75% (compared to 36% across schools).

“Inspire has been pivotal in allowing our society to host various events and in this way made our society the reference for any research-related activities on campus. We have more than 1000 likes on Facebook and our events can attract up to 150 students. Inspire has allowed us to fill in the gap in our school's curriculum for academic medicine by making sure we don't compromise on the quality of any event we organise due to financial constraints.”

6.1. INSPIRE for veterinary schools

34 students from the University of Bristol Veterinary School responded to the survey – this is equivalent to roughly 6% of the total veterinary student population at the university¹⁵. All

¹⁵ Based on RCVS data for 2014. University of Bristol: numbers attending the veterinary degree course: c. 570.

respondents were working towards their veterinary degrees.¹⁶ 29 (85%) of respondents had heard of the INSPIRE activities, but only 11 (32.4%) respondents were involved in them. Nine participants continued to provide information on their level of exposure to research¹⁷ and the impact of INSPIRE. The responses are summarised in Figure 8 below.

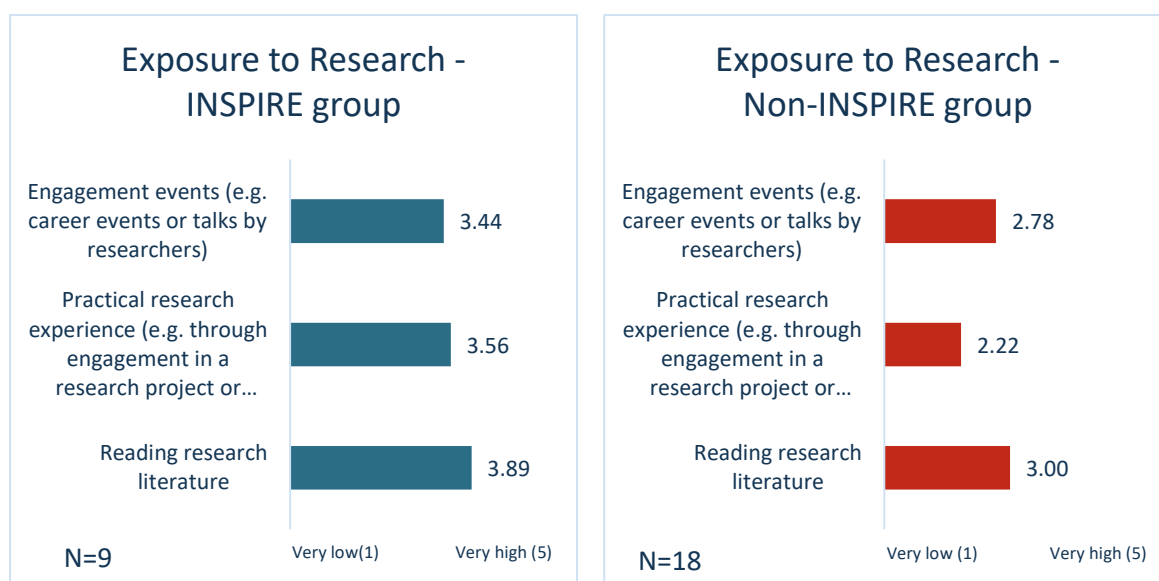


Figure 8 Exposure to Research of veterinary students

Respondents who were not involved with INSPIRE attributed their research exposure to work experience and coursework projects, especially final year research projects, talks and symposia, the INSPIRE Intercalation Conference and personal interest. The survey did not provide conclusive results over the extent to which INSPIRE had an overall impact on veterinary students' exposure to research. However, on a more granular level, the survey suggests that INSPIRE had a particularly strong interest in helping veterinary students to understand research as a career option.

The survey also captured to what extent INSPIRE changed students' interest in research as a career option. Out of nine responses, two stated that it had increased a lot, 4 that it had increased a little and 3 that it had not changed at all. As shown in Table 5, 85% of respondents indicated that they are planning to complete veterinary training after graduating. There is no significant difference between students who were involved with INSPIRE and those who were not.

Table 5 Post-graduation plans veterinary students

Do you plan to complete veterinary training after graduating?	INSPIRE students	Non-INSPIRE students
Yes	7 (78%)	16 (89%)
No	2 (22%)	2 (11%)
If no, what are you planning to do?	Clinical Practice (2)	Undecided, FE

¹⁶ There were no respondents who were undertaking a veterinary postgraduate degree or postgraduate training.

¹⁷ Survey drop outs: INSPIRE students =2, Non-INSPIRE students = 5

6.2. INSPIRE Special Project Grants

As part of INSPIRE, the Academy of Medical Sciences also awarded nine Special Project Grants. Schools could apply in a single round for special projects funds to pilot, develop or expand particularly innovative projects that engage students with research.

	Project description	Key achievements and evidence of uptake
Medidem	<p>Universities involved</p> <ul style="list-style-type: none"> - University of Cambridge (£22,008) - University of Birmingham (£5,000) - Warwick University (£5,000) - Keele and University of East Anglia <p>Objective</p> <p>Development of a web-based platform to connect students to research projects. Development of podcasts: to provide information about the academic pathway</p>	<ul style="list-style-type: none"> - Live website which can be populated by students and researchers/supervisors - Podcasts, including an introductory module that is linked to the website - Videos on different topics, e.g. medical CV preparation - Collaboration across five medical schools through monthly videoconference meetings
STARSurg (Student Audit & Research in Surgery Collaborative Network)	<p>Universities involved</p> <ul style="list-style-type: none"> - University of Birmingham (£12,000) <p>Objective</p> <p>Student-led research collaborative with the aim of engaging medical students in research. Encourage student investigators to undertake high impact audit and research, as well as helping them to develop transferrable skills</p>	<ul style="list-style-type: none"> - Annual cohort study (2014) with >1,000 collaborators, collecting data across 163 centres in the UK and Ireland - National STARSurg meeting at the Royal College of Surgeons of England in Sep 2014 reaching > 160 medical students from across 26 medical schools, launch of 2015 cohort study - Development and delivery of the Foundation in Audit & Research Course (initially at STARSurg national meetings, now also delivered locally at medical schools across the UK) - Twitter-based journal club which generates discussions around academic research - Student-registrar 'buddy scheme' piloted in the West Midlands
Sheffield	<p>Universities involved</p> <p>University of Sheffield (£10,000)</p> <p>Objective</p> <p>Implementation of a Summer Studentship programme to allow students earlier access to and experience of academic research and to allow those students to be mentored to be encouraged to enter intercalated degrees.</p>	<ul style="list-style-type: none"> - Programme launch in 2014/15 with 6 students going through the programme in 2015, and - Match funding from Sheffield Medical school
Newcastle	<p>Universities involved</p> <p>University of Newcastle (£10,000)</p> <p>Objective</p> <p>Expansion of the scope and range of activities offered to students, exposing them to research experiences and stimulate potential desire to follow a career in academic medicine.</p>	<ul style="list-style-type: none"> - Research Week to engage Year 1 and Year 2 students with research - 6th form Research Taster Sessions: opportunity for 6th form students to spend time in a university research lab - Research Induction: various engagements to stimulate greater interest in the Newcastle Academic Medical Society

	Project description	Key achievements and evidence of uptake
CURES	<p>Universities involved University of Glasgow University of Edinburgh University of Aberdeen University of Dundee Total funding: £24,000</p> <p>Objective Set up of CURES, the Caledonian Undergraduate Research Environment to support selected students in their research ambitions</p>	<ul style="list-style-type: none"> - Vacation studentships (£1,000 each) for 15 students to support them in their work on research projects - Improved collaborations between Scottish Medical and Dental Schools and their students through, for example, regular videoconferencing technology to share ideas and best practice about the development of research skills in undergraduates - Better understanding of how to bring dental and medical undergraduates together to explore how best to configure future joint academic activities at the interface between Medicine and Dentistry at undergraduate level. - New formal interactions between academic FY trainees and undergraduates through journal club activities and research projects
Dental undergraduates	<p>Universities involved King's College London Dental Institute (£9,797)</p> <p>Objective To inspire dental students to enter an academic career and, specifically to encourage more females to enter dental academia</p>	<ul style="list-style-type: none"> - One day conference (2015) held at KCL Dental Institute with 59 dental undergraduates from across 12 schools attending - Local events led by INSPIRE research champions
Cardiff NSMR-VC	<p>Universities involved Cardiff, Bristol, Exeter and Plymouth (£17,595)</p> <p>Objective To organise a national student research virtual conference</p>	<ul style="list-style-type: none"> - NSAMR conference held face to face in Cardiff (March 2015) with an interactive webinar that linked together 14 medical schools and c. 400 students - Competition to select 9 student oral presentations, 12 student e-poster presentations, 3 plenary presentations from student submissions

Impact

At the time of this evaluation, many projects had only just gone live and it will take further time to understand the overall impact of the projects (e.g. Medidem). However, an early indicator of success are the 'in-kind' contributions from medical schools and other external funders as well as a commitment from medical and dental schools to continue the projects beyond the end of the grant period. A high level overview of the in-kind contribution is provided in Table 1.

Table 6 'In kind' contributions to INSPIRE special projects

Project	'In kind' contributions
Medidem ¹⁸	<ul style="list-style-type: none"> - Time from Senior Academics to support the development of the platform
STARSurge	<ul style="list-style-type: none"> - Free meeting facilities provided by the Royal College of Surgeons of England (£13,500 and £12,375) - Free meeting facilities provided by the Royal College of Surgeons of Edinburgh (£2,500) - Catering and stationery worth c. £450 covered by different sponsors

¹⁸ <http://www.medidem.ac.uk/#/home>

Project	'In kind' contributions
Sheffield	<ul style="list-style-type: none"> - Staffing cost to administrate the student ship - External contribution to fund one studentship (£1,250, Alzheimer's Research UK)
Newcastle	<ul style="list-style-type: none"> - Staffing cost to administrate and coordinate (c. £3,000) - Academic supervision and lab consumables during 6th form taster session (c. £4,000) - Academic supervision during student vacation ships (c. £7,000)
Dentists	<ul style="list-style-type: none"> - Room hire, conference materials and administrative support (c.2,500)
NSMR-VC	<ul style="list-style-type: none"> - IT support and equipment as well as license for GoToWebinar provided by partner schools(c. £7,500) - Administrative support (c.£3,000)

According to the grant reports, most schools plan to continue their projects in the future. The STARSurg¹⁹ collaborative, for example, has by now run four different cohort studies and recently issued an invite to the National Research Collaborative Meeting in Birmingham in November this year. Sheffield, reported that all departments within its Medical School and other institutions within the University of Sheffield continued to be committed to the summer studentship scheme and agreed to renew their guarantee of matched funding for additional summer studentships. The conference for undergraduate dental students has also been repeated in 2016 (at Guy's Hospital in London) and in 2017 (at the University of Glasgow), with funding from the Dental Schools Council.

Another feature that differentiates the special project grants from the small INSPIRE grants is that many schools have used the funds to work collaboratively across schools, and/or to engage medical students from a variety of schools. The 2014 STARSurg cohort study, for example, reached students from across 26 medical schools. Birmingham, part of the schools working on Medidem, has also been particularly strong in enhancing student participation in study design. For the 2015 cohort study, INSPIRE funding was used to bring 50 'local leads' together ensuring coverage of all medical schools. The special project grant to King's College London Dental Institute also successfully managed to attract students from more than 12 different dental schools.

¹⁹ <http://starsurg.org/>

6.1. INSPIRE in the national context

Postgraduate academic medical training

Several schools described how INSPIRE feeds into local postgraduate clinical academic pathways (see Figure 9). For example, INSPIRE enables research experience such as placements or studentships, making stronger candidates for entry to the Academic Foundation Programme (AFP). In particular, one school explained that increasingly, candidates for the AFP already have research experience when they apply, which was not the case 4-5 years ago. They believe that this is directly attributable to INSPIRE.

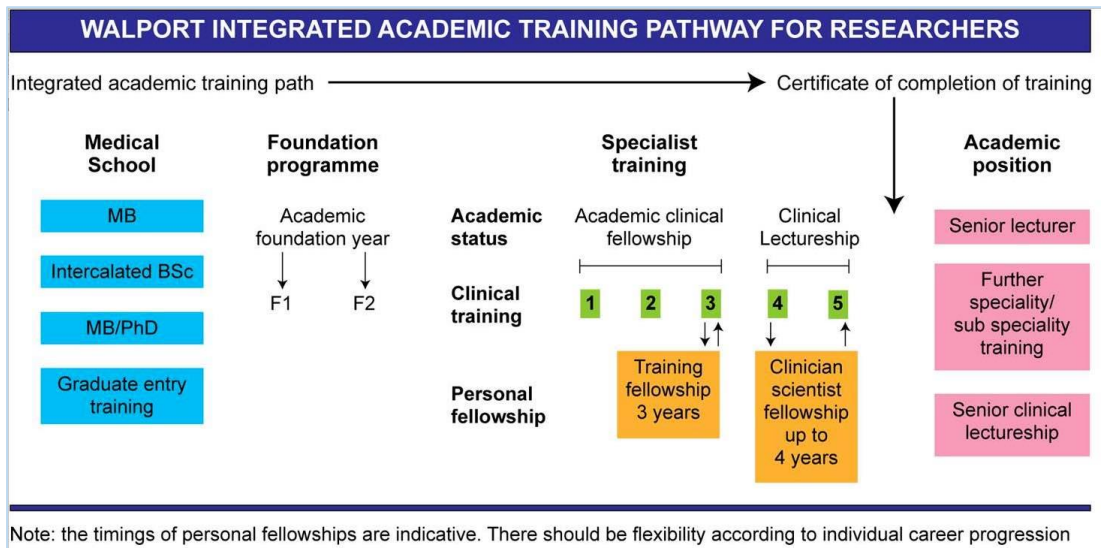


Figure 9 Academic Training Pathway for Researchers²⁰

National Coordination

INSPIRE has created individual hives of industry at medical schools across the UK, however feedback was received that some activities can appear to be parochial. More effort is required to help draw these activities together, achieving better economies of scale and sharing best practice at a regional or national level. The 'CUREs' special project tried to connect schools and students across Scotland, with mixed success and a major focus of NSAMR is to connect medical societies.

The INSPIRE workshops that had been held in London were considered to be very helpful for exchanging ideas and building partnerships. There was strong support for these to be held more frequently e.g. annually and / or regionally, with more opportunities for students to attend.

INSPIRE and NSAMR

The National Student Association of Medical Research (NSAMR) was founded in 2012 to coordinate medical student research societies across the UK. The organisation is completely student-led and aims to foster medical research amongst UK medical students. NSAMR connects and coordinates 26 Medical Research Societies across Medical Schools in the UK. It has achieved a lot with very modest funding, being supported by a rolling commitment of £7k-£10k each year from the Wellcome Trust. NSAMR was recently established as a non-profit, a key aim being to place the organisation on a more sustainable footing, alongside a new 3-5 year plan.

²⁰ http://www.ukcrc.org/wp-content/uploads/2014/03/Medically_and_Dentally-qualified_Academic_Staff_Report.pdf

NSAMR is considered as a national students grassroots network, “run by students for students”. A main activity for NSAMR is the Annual National Conference. In 2017, the conference was held in Manchester and had 177 attendees (91 student delegates, 55 person team running the conference including speakers, 28 outreach students and 2 teachers). The programme includes plenary talks, poster and oral presentations and a selection of workshops on topics such as clinical app design, teaching workshops, presentation skills and onco-surgery skills.

NSAMR develops and coordinates other activities, such as webinars, online journal clubs, a ‘Taster Month’ to promote research experience, the NSAMR Research Database for student / supervisor matching, audit projects (previous topics have included sepsis in Wales; infection; Parkinson’s), outreach activities to sixth form, a buddy scheme for sixth form / medical student matching, the new NSAMR Journal and mentoring support. Additional focus areas include the promotion of open access, open science and open source principles in medicine.

INSPIRE and NSAMR were considered to have approaches that were somewhat complementary. In particular, NSAMR, perceived as a ‘grassroots’ organisation, was effective at harnessing student enthusiasm and peer-to-peer engagement through a ‘bottom up’ approach. Combined with the Academic-led / facilitated approach of INSPIRE, both funding and student enthusiasm could combine to strong effort when organising activities.

However, many interviewees considered that overlap exists between activities supported and promoted by INSPIRE and NSAMR. NSAMR was perceived to have a stronger national profile amongst students, complemented by INSPIRE support for individual schools. However, a closer partnership between INSPIRE and NSAMR should be considered to harness further, and in a coordinated manner, the energy and commitment of medical students across the UK. Through such partnership, INSPIRE’s reach to medical students could be extended, raising further the prestige of the scheme through the Academy’s association. It was also suggested that there could be more direct interaction between the Academy and medical students through e.g. a stronger presence of the Academy at the annual NSAMR conference. This could involve inviting Academy Fellows to speak at the conference, the Academy sponsoring a session or being more involved in co-organising the conference.

Communication and coordination between the organisers of NSAMR and INSPIRE could also be improved. For example, various Medical Schools have developed valuable schemes through INSPIRE support, however in many cases student access can be limited to the particular school. Closer working between INSPIRE and NSAMR could facilitate the rolling out of successful INSPIRE pilots to other schools across the country.

NSAMR has strong networks with students and, increasingly, alumni. In the future, to provide further opportunities once students graduate medical school, NSAMR is proposing the development of a sister organisation for postgraduates in the Foundation Programme or Specialist Clinical Training, the Association of Medical Research (AMR). Closer working between INSPIRE and NSAMR would help to improve the coordination and sharing of student engagement activities across the UK.

Feeding Skills Gaps / Capacity Building in Priority Areas

One interviewee highlighted the potential of INSPIRE to attract medical students into areas of national importance where there is a recognised shortage of skills e.g. pathology, psychiatry, dementia, informatics, public health and primary care. Indeed, NIHR has been conducting a review of NIHR training, recognising the need to build capacity in these areas.

It was, therefore, suggested that INSPIRE could be used to accelerate the uptake of medical students into these areas where greater capacity is needed. For example, specialty-focussed networks could be created e.g. the Pathological Society has held two national meetings aimed at engaging medical students. Further engagement of clinical societies and other funders in supporting INSPIRE activities could help to boost activities in areas of skills shortage. For example, the NIHR, specialist societies or other funders could provide support or bursaries for student placements or international research meetings.

However, interviewees also felt that it would be premature to put additional effort into engagement in key areas of skills shortage, since more effort is required to ensure sustainable increases in research engagement across the student population. In particular, getting medical students interested in academia is a major challenge and attracting them into specific 'Cinderella' subjects is also a considerable task. Therefore, INSPIRE should focus on the first hurdle of engaging medical students in research and other activities in later years should target uptake into key areas. For example, one interviewee reported that 50% of intercalated students stay in the same field in their academic career and therefore an important route to specialisation is to focus on intercalation. There exists scope here for clinical or scientific specialty societies to be more involved in supporting students to do intercalated degrees.

Nevertheless, in the wider landscape, the important contribution of INSPIRE towards engaging medical students in research should be recognised as building a platform that can feed students into key specialties, acting as a focal point to link through to other funders and clinical societies.

7. Future

7.1. Funding

Interviews with INSPIRE leads considered how the scheme might be developed in the future. There was wide recognition that INSPIRE should continue because it has been a strong catalyst, releasing a tremendous amount of energy and enthusiasm for research. Future support at the current level would be appropriate to carry out a range of engagement activities - without this, deaneries would lose interest and activity would decline. Indeed, ongoing involvement from the Academy is also important for raising its own profile with students, important for future engagement with clinical academics.

Whilst schools have provided funding in kind, few locations have ventured beyond this source to obtain external funding. Arguably, more could be done to encourage recipients to seek external funding, however incentives for this could be challenging without reducing INSPIRE funds and this would place additional commitments on staff and students, on top of current workloads. Nevertheless, more could be achieved if more funding was available, particularly through support for more costly activities such as studentships and placements.

Whilst some schools had reported impressive increases in the number of students undertaking an intercalated degree (e.g. Norwich, Exeter and Newcastle), others had not had this experience. More insight could be shared between schools to identify factors that boosted intercalation. One school reported that previous changes to the curriculum had contributed to low numbers of students intercalating. However, further curriculum changes are planned to introduce a fully fledged module looking at research, with the aim of boosting levels of intercalation. It was also noted that the extra time taken to do an intercalated degree places a financial strain on and therefore intercalated scholarships could be considered.

Other schools indicated that they would like to see more opportunities to provide high quality students with placements to prestigious academic labs (e.g. Crick or Sanger Institute), industry or international research experience through e.g. placements or conferences.

Further thought could also be given to engaging other funders in supporting activities that are more directed at individuals who are more committed to pursuing research. For example, clinical / scientific societies such as the Pathological Society, British Neuroscience Association and British Society for Immunology all provide bursaries or funding for research placements. Furthermore, other funders with specific interests in e.g. cancer or cardiovascular research could be encouraged to fund similar studentships, or join a consortium to support this. By working in this way, INSPIRE funds could be prioritised towards activities that provide research engagement opportunities to the general population of medical, dental and veterinary students. Potential partnership working in this way is illustrated in Figure 10.

Indeed, the NIHR has expressed an interest, following a review its skills strategy, in partnering to support the INSPIRE scheme to provide it with more capacity and impact. Such engagement could, for example, provide more individual-based support for research placements, studentships or intercalation, as discussed above.

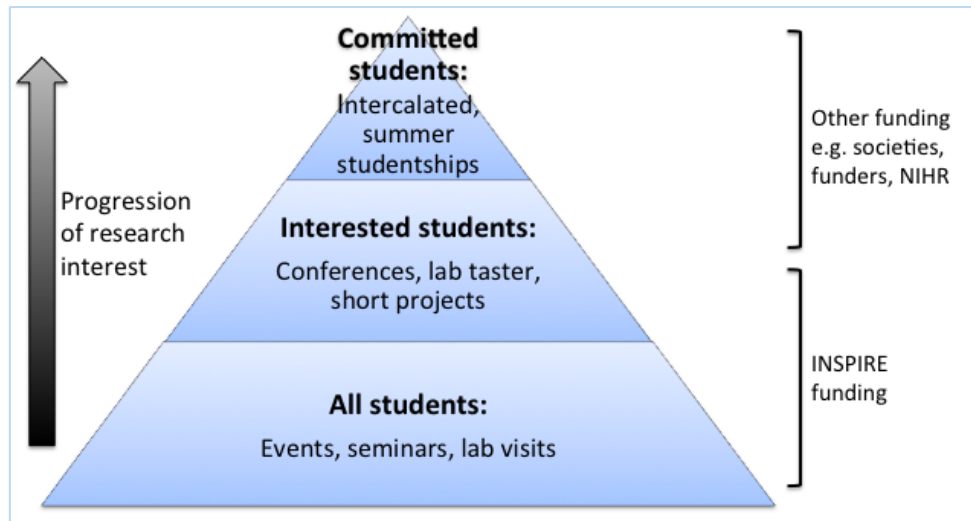


Figure 10 Potential partnership working

7.2. Programme Management

INSPIRE Leads were extremely positive about their interactions with the Academy, welcoming effective organisation and an appropriate level of involvement. However, the award of funding from the Academy can be irregular - not necessarily every year – and therefore trying to build and sustain activities on low funding levels can be difficult. Overall, schools would like to see funding being released on a more regular basis e.g. annually or for a longer term. Funding in this manner would help to support the sustainability of INSPIRE activities and would also reduce the administrative burden on schools and the Academy.

INSPIRE Leads also noted that they would welcome feedback following this review through sharing of the findings and outcomes including survey. They would also be keen to receive from the Academy and Wellcome Trust their overall perceptions on the success of the INSPIRE programme and official feedback on whether individual schools have met the programme's goals.

Appendix I: Summary table – Grant reports

Table 7 Reports analysed

2015				2017	Unknown
Aberdeen	Glasgow	Newcastle	Southampton	Imperial College London	Bristol
Bart's	Hull York	Norwich	St George's	Keele	St Andrews
Birmingham	King's College London	Nottingham	Swansea	King's College London	
Brighton and Sussex	Leeds	Oxford	UCL	Leeds	
Cardiff	Liverpool	Peninsula	Warwick	Leicester	
Edinburgh	Manchester				

Table 8 Summary of INSPIRE funded activities by school

School name	Studentships	Network development	Special Events	Activities	Number of students engaged
Aberdeen	10		Academic Career Evenings; Research symposiums	Studentships; scholarships overseas; research symposiums; academic career evenings; workshops	10 studentships; 2 part-funded scholarships;
Bart's	Y		Bart's medical & surgical society conference; 3X Neuroscience Symposia; 6X meetings of the Mind Medicine and Society Group	Poster competition; Informative workshops; Conference lectures; Speakers; peer-led journal club	~150; 120/171/160/; 150/130/100/100/100/100;20-40
Birmingham			Networking/ Mentoring Dinners; Patient and Public Involvement event	Research portfolio reviews; networking; research training events; blogs;	83 across 2 networking events; 64 across 2 training events; 12 students intercalated; 28 at PPI event
Brighton and Sussex	Y	Student Research Network (internal)	NSAMR and INSPIRE virtual conference	IRP prizes; academic support; Poster presentations; Student Research Network	22 students received grants; 22 students participated in the conference; 17 student presented a research poster

School name	Studentships	Network development	Special Events	Activities	Number of students engaged
Bristol	22 (across the collaboration?)	Collaboration with Cardiff, Exeter & Plymouth	Showcase evenings	Research taster sessions; literature reviews; studentships; research prizes; showcase events	180 tasters over 2 years; 65 lit reviews; 3 studentships; 4 research awards; 30-90 at each of 4 events; 19 conference awards over 2 years; 15 conference abstracts; 1 paper
Cardiff	8		CUREs student Research Symposium	Symposium; talks; student posters & presentations; taster day competition; studentships	60-80 students at symposium; 140 taster day (50 outside Cardiff); 8 studentships over 4 years.
Edinburgh				Online portal & project bank	6023 views of the Research Hub; 12 confirmed project via online survey (n=51)
Glasgow		Forging links with other Scottish Student Research Societies	Research Prize Night @ Royal College of Physicians and Surgeons of Glasgow.	Trainee-led workshops; journal club; mentorship programmes; research SSCs (literature reviews); research prize night	20-40 at journal club per month; >100 at research prize night
Hull York			INSPIRE Career Fair and Summer Project Pitches; NSAMR Virtual Conference	Lectures; workshops; careers fair; project pitches; summer projects; virtual conference	15 students at lectures; 15 students in workshop; 10 students pitching projects; 8 students doing summer project; 2 students at virtual conference
Imperial College London			The National Conference; Young researchers Conference; Academic Foundation Programme	ProjectPal project linking platform; Wikki page development; Wikki Hackathon; talks; interviews; conferences; committees; workshops;	83 project applications through the platform; 10 students developed 3 pages; 18 students attended hackathon; total of 531 attendees across all events hosted by SORA
Keele	30 over 2 years (part-funded)		Meet the Researcher networking event	Studentships; student posters and presentations;	30; 20 poster presentations; 8 oral presentations; 70 showcase student attendees; 40 at Meet the researcher event
King's College London	5		Student Introduction to Research Night; Research Poster Evening; Make the Most of Your Library Night	Lecture series; electives; summer internships; peer-led research training; poster evening; talks	4 attended lectures; 1 research elective; 5 internships; 75 attended research evening; 57 attended talk

School name	Studentships	Network development	Special Events	Activities	Number of students engaged
Leeds		National Pathology Students Society	Many	Taster days; evening events; workshops; conferences; careers events; prizes; research summer schools; career advice	294 attended taster days; 241 at evening events; 260 at workshops; 46 at conferences; 30-70 at career events; 55 prizes; 122 students at summer school, and 108 sixth formers;
Leicester			INSPIRE East Midlands Medical Student Research Conferences; Evening SPARKS Talks	Conference; LUMRS LINK matching scheme; talks; bulletin; journal club; research café; practice interviews	94 across 2 conferences; 91 LUMRS LINK projects; 5 SPARKS talks, 20-50 attendees each;
Liverpool			Surgical/ medical research evenings; Intercalation event	Research matching scheme; talks; workshops; careers fair; curriculum design	81 matching scheme; 30 surgical research evening; 20 medical research evening; 20 at careers event; 200 intercalation event; 80 curriculum design
Manchester			Undergraduate Medical Research Conference; British Undergraduate Dental Research Conference 2015; RARE Diseases Research Symposium	Lecture series; focused talks; conferences; research placement database development; newsletter	58 at medical conference; 208 at dental conference; 443 across lecture series; 80 at symposium
Newcastle	8		Newcastle Academic Medical Society Annual Meeting	Research scholarships; electives; AGM	8 research scholarships over 2 years; 6 electives over 2 years; 110 delegates at conference
Norwich (UEA)	Increased from 6 to 60+ per year		East Midlands Medical Student Research Conference; Technology and Innovation Conference	Student group; lecture series; student selected study research; conferences; journal club	300 signed up to NATURE; 100 doing SSS research across 3 years; 61 at East Midlands Conference across 2 years; 15-30 students per journal club; 52 at technology conference
Nottingham	17 LINK projects		INSPIRE East Midlands Student Research Conference	Conferences; student research projects; website; lecture series; information evening; dissertation workshop; mock interviews	218 at conference over 2 years; 17 projects; 800 across whole lecture series; 94 at information evening; 148 across 2 dissertation

School name	Studentships	Network development	Special Events	Activities	Number of students engaged
					workshops; 35 mock interviews over 2 years
Oxford	Y		NSAMR conference	Survey; journal club; careers fair; NSAMR conference; research seminar; SSM fair; web-based activities; financial support for research-related activities	15-20 students per journal club; 80-100 students at careers fair each year; all 2 nd year students at research seminar; 10% 4 th year students undertook research SSMs; 18% & 12% of 6 th year students undertook research SSMs and electives respectively.
Peninsula	16			Taster days; studentships; conferences; new webpages	111 students doing taster days over 2 years; 16 studentships over 2 years; 75 students at conference
Southampton			Annual Showcase Event; National Undergraduate Cancer Research Conference; The Academic GP evening talk; The Academic Emergency Medic evening talk;	Research taster sessions; journal clubs; panel discussion; talks; workshop; mentorship scheme; showcase events; conference	8 taster events, 10-20 students at each; 6 journal clubs, 10-30 at each; 21 at panel; 35 at "How to use your portfolio and mentor" talk; 40 at showcase; 60 at conference; 30 at GP talk; 30 at emergency medic talk; 245 website users; 22 students allocated mentor
St Andrew's			Inter-institutional student research conference-	Speed dating with other students; research presentations; support to attend external conference	130 students at speed dating; 120 students at research presentations; 16 students at research conference; 1 students at external conferences
St George's			SUPRA: International Student Research Conference	Conference; workshop; talk	Did not respond
Swansea			Biobreakfast	Research tasters; student society meetings; publicising events	14 at research tasters across 2 years; 10-20 students at society meetings; 70 at Biobreakfast event
UCL	Y		InspireMedicine conference	Seminar series; conference; studentships	20-80 students per seminar across 12 seminars; 150-200 students per conference, 2 conferences; 20 studentships

School name	Studentships	Network development	Special Events	Activities	Number of students engaged
Warwick	Y		Warwick Academic Medicine Society Annual Conference; Networking Galas	Conferences; skills workshops; journal clubs; networking galas; project groups	76 delegates across 2 conferences; 12-32 students per workshop/ journal club, 13 events; 116 signed up for project (70% connected to supervisor)
No reports from: Cambridge, Dundee, Sheffield, Queen's University Belfast					

Appendix II: Survey comments

General comments about INSPIRE

Inspire has been pivotal in allowing our society to host various events and in this way made our society the reference for any research-related activities on campus. We have more than 1000 likes on Facebook and our events can attract up to 150 students. Inspire has allowed us to fill in the gap in our school's curriculum for academic medicine by making sure we don't compromise on the quality of any event we organise due to financial constraints.

I've attended the INSPIRE conference at Exeter- great success!

INSPIRE is a great initiative and I would like for it to continue.

INSPIRE was a great way to become involved in a research team and has since opened up many more opportunities for me. I am incredibly grateful for this scheme.

As an MBPhD student my exposure to research was already quite high, but I think the INSPIRE scheme has a very important role to play for students who aren't doing research degrees during their medical training but are still interested in medical research.

The Inspire programme is very prominent at Leicester and their continued support of the research society, events and conferences is really valuable

I really enjoyed my INSPIRE research project and I think the variety of research areas available is great and makes it really open to students with lots of different interests.

I'm glad to have INSPIRE supporting my school & will definitely continue attending the events.

Inspire gave me the opportunity to do my own research project in a lab. I would never have had the opportunity to do this had it not been for inspire since I did not have the funds to do an intercalated degree.

Inspire journal is very good in promoting research

The student led magazine is a great way to see the opportunities we have and can aspire to.

I am very grateful of the financial support from the Inspire initiative, which has enabled me to present at an international conference. I hope that this support continues in the next academic year for other students to benefit.

Think INSPIRE events made a tremendous difference to medical students in terms of career choices

Thanks to INSPIRE funding I was able to present my work at an international conference - highly appreciate it!

The INSPIRE fund has been crucial to the research events of the Manchester Medical Research Students' Society, we are extremely grateful for it and very proud of the impact had on students at the University of Manchester. I very much hope some form of the programme will continue for those that follow.

I think the work of inspire is fantastic and provides a great opportunity for students to explore the academic side of medicine, something the core curriculum (at bristol at least) doesn't emphasise

I think INSPIRE is an excellent initiative to help medical/dental students become more familiar with research during their studies, as well as encouraging students to enter academic career paths after graduation. I think it would be useful for INSPIRE to try and widen their approach in order to engage as many students as possible in research related activities.

INSPIRE has inspired me to delve deeper into research life and cultivated my interest to involve myself in clinical research programmes.

It is really useful, the exposure to research and clinical researchers is amazing.

The output you get from it also good - it has definitely swayed me towards thinking about an academic career

I feel the scheme is really good - it inspired me to want to write articles and publications. I think more could be done in terms of advertising to get students involved.

I had previously not considered research in medicine, however after attending the inspire conference in Bristol by chance after being let in on the day despite not having booked a ticket, I discovered the amazing work of medical students from across the country and heard from many inspiring doctors and researchers about their achievements and careers. This literally as the name of this programme suggests, 'inspired' me to apply for and undertake an inspire Summer studentship. Following this I then intercalated despite coming to medical school not expecting to. During Intercalation I was lucky to work with an excellent supervisor and do research I am really passionate about personally. This has given me opportunities such as presenting at conferences both poster and oral presentations and I now hope to publish my work and continue with future research projects. I am extremely grateful to the Inspire programme for its opportunities it provides.

The INSPIRE scheme has given me several valuable opportunities to develop my knowledge and skills in research. It especially good for students who have little research experience and are just starting out. I feel that without INSPIRE I would not have been able to participate in research and related activities as much as I have done

INSPIRE has heavily influenced my medical degree and introduced me to the world of clinical research, without the programme I think I would have had a very different experience. I think it is extremely cost effective and it would be very disappointing if the funding was cut.

Doing a research studentship funded by the inspire scheme has motivated me to complete an intercalated masters by research and pursue research alongside my future clinical career.

Doing an inspire funded SSC and summer project in my second year had a hugely positive benefit on my time at medical school and every year since then I have done some form of research project and really enjoyed it.

New collaborations

Found the research project through the LUMRS LINK program. Have really enjoyed it; it's provided a great opportunity to connect with researchers that wouldn't have been easy otherwise.

On the importance of intercalated degrees

Before doing my intercalated degree, I was not really aware of the research aspects around medicine nor did I think it would be something that suited me.

It was only during my work of my BSc and specifically my biomedical engineering project that I became fascinated and really enjoyed the research aspects.

Challenges

I found the programme inaccessible as if it was only for people who wanted to do academic jobs in the future, and it was hard to get funding

I've never heard of INSPIRE before the email inviting me to complete this survey, despite being 3 years into my course

other point is for researchers, there should be a good way on recommend supervisors for those willing to carryout a research degree under them as often you find you've wasted your money when you've been under that professor.

It is difficult to access the inspire programme at our university as it appears to favour students with ample previous research opportunities such as PhD and MSc experience. It would be good if inspire could open up its application process to students who would like to gain research experience and would otherwise have not had the opportunity to gain such experience.

I tried to involve myself with INSPIRE. But the problem I identified as is common with these kinds of projects is the lack of time contributed by the supervising seniors or proper auditing of cost-benefit analysis. This leads to mismanagement and medical students taking advantage to promote pseudoscience while neglecting the inspiration for the development of basic scientific skills (which I thought was the goal of Inspire). In short, this scheme needs stricter guidance and authority given to people with the right skills, enthusiasm and similar mindset as the Academy of Medical Sciences.

INSPIRE is a great scheme within medical schools, however it should also be used to encourage cooperation between medical schools and educational institutions.

The programme is a great idea but it hasn't actually affected my desire to be a researcher - I got involved in e.g. the conference at Cambridge because I want to be a researcher, not the other way around

Vet students

Inspire is a fantastic scheme. I have been wanting to have a research project of my own and get involved with research for a while. But as a vet student I have to juggle my EMS placement requirements as well as using my summer to earn a little bit of money to see me through the year. Having the inspire stipend allowed me to undertake a extensive project (which I have wanted to do for a long time) without having to worry how I am going to pay for rent, bills and food whilst doing the project. This really did make a big difference! Thank you inspire !

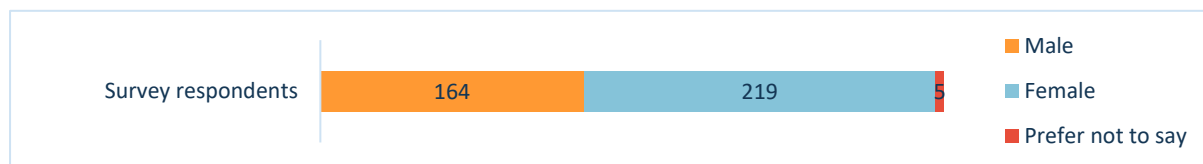
Something disappointing was what I felt, a lack of engagement and interest by the medical departments in the veterinary department and how we as vets are relevant and part of the programme. I perceived that perhaps other departments could not see what we had in common unless we proposed or talked about human research, and did not make an effort to accommodate more of the veterinary perspective into the magazine and events.

As admirable as the INSPIRE programme is, I wasn't able to take full advantage of it as a vet student. Our time is limited by compulsory placements during the holiday period and few people have 10 or even 6 weeks to spare to complete a project. I would have loved to do one but was unable.

Appendix III: Demographics of survey respondents

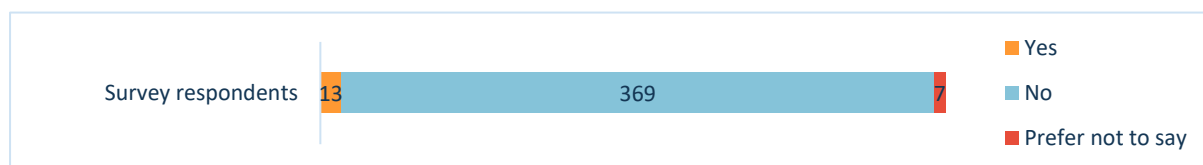
Gender – Medical and Dental students

<i>Answered</i>	388	<i>Skipped</i>	82
-----------------	-----	----------------	----



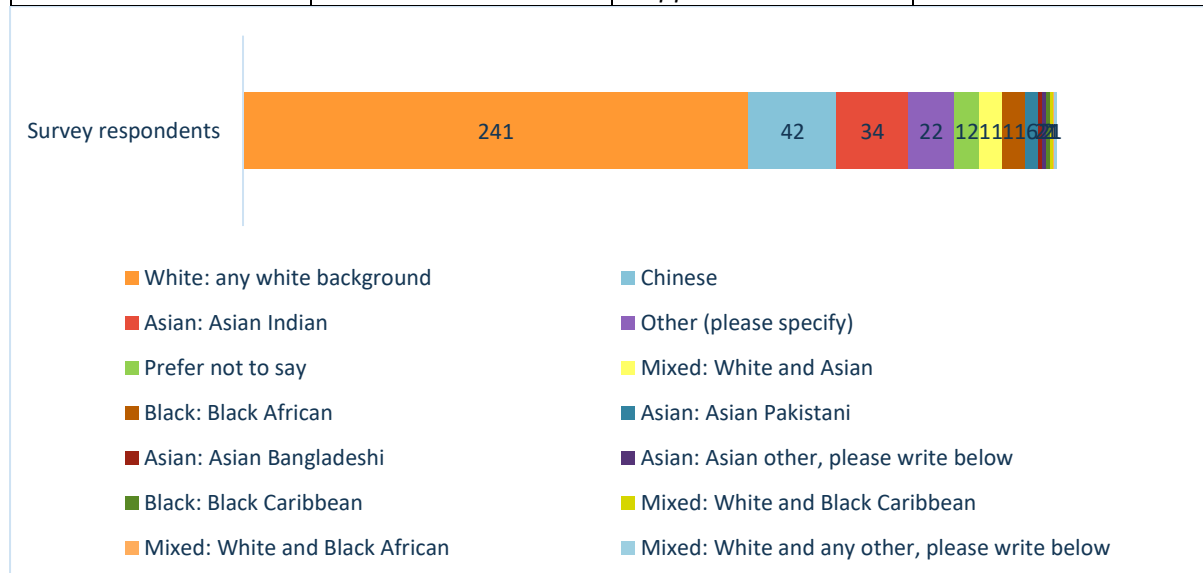
Disability – Medical and Dental students

<i>Answered</i>	389	<i>Skipped</i>	81
-----------------	-----	----------------	----



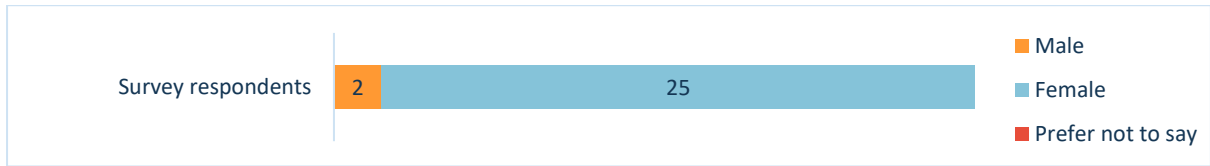
Ethnic group – Medical and Dental students

<i>Answered</i>	388	<i>Skipped</i>	82
-----------------	-----	----------------	----



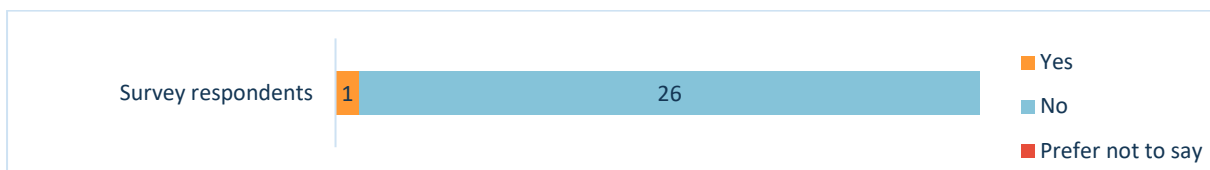
Gender – Veterinary students

<i>Answered</i>	27	<i>Skipped</i>	7
-----------------	----	----------------	---



Disability – Veterinary students

<i>Answered</i>	27	<i>Skipped</i>	7
-----------------	----	----------------	---



Ethnic group – Veterinary students

<i>Answered</i>	27	<i>Skipped</i>	7
-----------------	----	----------------	---



Appendix IV: Definitions and List of Figures

Definitions

Respondents: All survey respondents

INSPIRE students: Medical/dental or veterinary students who indicated in the survey that they were involved with INSPIRE activities at their school

Non-INSPIRE students: Medical/dental or veterinary students who indicated in the survey that they were **not** involved with INSPIRE activities at their school

List of Tables

Table 1 Survey respondents by home university	15
Table 2 Survey respondents by year of study	16
Table 3 Levels of awareness and engagement by school	17
Table 4 Post-graduation plans medical & dental students	20
Table 5 Post-graduation plans veterinary students.....	22
Table 6 'In kind' contributions to INSPIRE special projects	24
Table 7 Reports analysed	31
Table 8 Summary of INSPIRE funded activities by school.....	31

List of Figures

Figure 1 Potential partnership working	2
Figure 2 Breakdown of INSPIRE activities and % of schools that mentioned these activities in their End of Grant reports	7
Figure 3 Breakdown of survey respondents by gender	16
Figure 4 Percentage of respondents per year group who were not aware of INSPIRE	18
Figure 5 Involvement with INSPIRE.....	18
Figure 6 Exposure to Research – Medical and Dental students (1=Very low, 5=Very high).....	19
Figure 7 Impact of INSPIRE.....	20
Figure 8 Exposure to Research of veterinary students	22
Figure 9 Academic Training Pathway for Researchers.....	26
Figure 10 Potential partnership working	30

Appendix V: Methodology

To inform this report, we conducted 1:1 interviews with key stakeholders as shown in the table below.

INSPIRE leads	University
Dr Tony Pickering	University of Bristol
Dr Mark Gurnell	University of Cambridge
Professor Colin Dayan	Cardiff University
Professor Ewan Pearson	University of Dundee
Professor Tamsin Ford	University of Exeter
Dr Adam Greenstein	University of Manchester
Professor Matthew Walters	University of Glasgow
Professor Phil Quirke FMedSci	University of Leeds
Dr Bob Norman	University of Leicester
Professor Andrew Fisher, Dr Andy Gennery and Lois Neal	Newcastle University
Professor Linda Wooldridge	University of Bristol Veterinary School
Professor Thomas MacDonald FMedSci	Bart's and The London, QMUL
Other stakeholders	
Professor Jonathan Seckl	University of Edinburgh
Professor Moira Whyte FMedSci	University of Edinburgh
Professor Dave Jones	Dean of NIHR Faculty Trainees at the NIHR
Dr Anne-Marie Coriat	Head of Research Careers, Wellcome Trust
Robert Lundin	Previous Chair of NSAMR
Serena Banh	Current Chair of NSAMR
James Keitley, Aisha Sooltangos	Students at Manchester University

Survey questions

The online survey was distributed to students by the INSPIRE leads at medical, veterinary and dental schools. The response rate was affected by the exam period and summer holidays.

Introduction

The INSPIRE scheme is a UK-wide initiative designed to inspire medical, dental and veterinary undergraduates to consider a research career. The Academy of Medical Sciences launched the scheme in 2013, with support from the Wellcome Trust. The scheme is open to all medical and dental schools, with veterinary schools joining in 2016. The INSPIRE scheme provides the schools with funding to support a range of activities that engage students and build interest about research.

We are conducting this survey to inform the future development of the scheme. Your responses and views will help us to assess what the scheme has achieved and inform how it can best meet the needs and interests of medical, dental and veterinary students and schools in the future.

Q1: What medical or dental school do/did you attend?

[drop down list]

Q2: At what stage in medical / dental training are you currently?

[drop down list]

- Year 1
- Year 2
- Year 3
- Year 4
- Year 5
- intercalated
- Academic Foundation year 1
- Academic Foundation year 2
- Specialist training
- MB/PhD programme
- Other

Q3: Have you heard of the activities supported by the INSPIRE scheme at your school?

- Yes
- No

Q4: Were you involved in the INSPIRE programme activities at your school?

- Yes
- No

If yes, continue below, otherwise move to Q11.

Q5: When were you involved in the INSPIRE programme at your school?

- 2013
- 2014
- 2015
- 2016
- 2017

Q6: Were you involved in the design of the INSPIRE programme activities at your school?

- Yes
- No

If yes, how?

Open text

Q7: What level of exposure to research would you consider yourself to have had through:

	Very low	Low	Moderate	High	Very high
Reading research literature					
Practical research experience (e.g. through engagement in a research project or development of your own personal project)					
Engagement events (e.g. career events or talks by researchers)					
Other (please specify below)					

Please specify the other ways in which you have been exposed to research:

Open text

Q8: How much of this exposure would you attribute to the INSPIRE programme?

	None	A little	Some	Most	All

Q9: To what degree do you agree with the following statements:

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	N/A
The INSPIRE programme improved my understanding of research literature						
The INSPIRE programme improved my understanding of research project design						
The INSPIRE programme improved my understanding of research, as a career						
The INSPIRE programme improved my ability to read and understand research papers						

Q10: How do you feel the INSPIRE programme has changed your interest in research, as a career option?

	Decreased a lot	Decreased a little	It hasn't changed	Increased a little	Increased a lot

Skip to Question 13

Questions for students who were not involved with INSPIRE

Q11: What level of exposure to research would you consider yourself to have had through:

	Very low	Low	Moderate	High	Very high
Reading research literature					
Practical research experience (e.g. through engagement in a research project or development of your own personal project)					
Engagement events (e.g. career events or talks by researchers)					
Other (please specify below)					

Please specify the other ways in which you have been exposed to research:

<i>Open text</i>

Q12: What do you attribute this exposure to research to?

<i>Open text</i>

Q13: Do you plan to complete clinical training after graduating?

For all survey participants

- Yes
- No

Q7a.1: If no: what do you plan to do/ have you done after graduating?

For all survey participants

- Medical research
- Further education
- Other:

<i>Open text</i>

Equality and Diversity Monitoring Form

Please note: All information you wish to provide on this page is confidential, used only for statistical purposes and is not seen by interviewers.

The Academy of Medical Sciences accepts its responsibilities to reflect the communities in which it works. We are therefore committed to a policy of Equal Opportunities and applications are welcome regardless of gender, marital status, sexual orientation, age, disability, ethnic origin, or religious belief.

The Academy of Medical Sciences encourages applications from disabled people and disabled applicants may telephone our office to discuss access arrangements and the level of physical ability necessary for this job before applying.

Do you regard yourself as disabled: Yes No

Are you: Male Female Prefer not to say

Gender identification if different from above:.....

What is your ethnic group (please tick one box):

White	Any white background	<input type="checkbox"/>
Mixed	White and Black Caribbean	<input type="checkbox"/>
	White and Black African	<input type="checkbox"/>
	White and Asian	<input type="checkbox"/>
	White and any other, <i>please write below</i>	<input type="checkbox"/>
<hr/>		
Asian	Asian Indian	<input type="checkbox"/>
	Asian Pakistani	<input type="checkbox"/>
	Asian Bangladeshi	<input type="checkbox"/>
	Asian other, <i>please write below</i>	<input type="checkbox"/>
<hr/>		
Black	Black African	<input type="checkbox"/>
	Black Caribbean	<input type="checkbox"/>
	Black other, <i>please write below</i>	<input type="checkbox"/>
<hr/>		
Chinese or other ethnic group	Chinese	<input type="checkbox"/>
	Other ethnic group, <i>please write below</i>	<input type="checkbox"/>
<hr/>		
Prefer not to say		<input type="checkbox"/>