Science Media Centre Strategic Review Report

April 2014

Executive Summary

The Science Media Centre (SMC) is an independent charity working to promote the voices, stories and views of the scientific community to the news media when science is in the headlines. Since opening its doors in 2002 the Centre has gone from strength to strength, and in recent years has passed several milestones, including its constitution as a fully independent charity (2011) and its 10th Anniversary (2012).

The Trustees felt that these achievements, which have firmly established the SMC as a permanent fixture in the science media environment, provided an ideal backdrop to reflect on the Centre's first decade of operation; to review its vision, mission and objectives, and to take the opportunity to consult some of its key stakeholders. A strategic review was undertaken during 2012-13, guided by a small working party and employing several approaches to consult with over 100 stakeholders, Trustees, Advisory Committee members and staff.

The findings of the review demonstrate that the need for the SMC is as great as ever and confirm that it is operating from a position of strength. The future challenges of a rapidly changing media and scientific arena, however, mean that it must not rely on past successes but ensure it is prepared to meet those challenges head on. Recent stories, from the extreme flooding to medical data sharing underline the fact that science is never far from the headlines and that the science community must reassert its efforts to respond on a daily basis.

Another key message to emerge is that the SMC owes a large part of its success to an uncompromising focus on its mission, and its independence from any institution or funder. The main outcome of the review is therefore that the SMC renew its commitment to that focus more strongly than ever. The details of how it might achieve that, along with a number of other potential outcomes raised during the review, are described in the pages of this report.

The Trustees welcome the findings of this review, acknowledging the benefits afforded by the process and the contribution it has made to the confidence and robustness of the SMC. They are grateful to everyone consulted, who gave freely of their time and advice.

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1. Introduction & General Context

1.1 Building on the SMC's First Decade

The Science Media Centre (SMC) is an independent charity working to promote the voices, stories and views of the scientific community to the news media when science is in the headlines. Established in April 2002, with its roots in the House of Lords Select Committee on Science and Technology Third Report: Science and Society, it took up the gauntlet to meet the "great challenge" of adapting science to frontline news.

The SMC responds to the news agenda by distributing scientific opinion to the mass media. Its overall goal is to promote, for the benefit of the public and policymakers, accurate and evidence-based information about scientific subjects in the media, particularly on controversial and complex stories when confusion and misinformation are most likely to occur. The Centre sees science in the headlines as an opportunity rather than a threat, and operates by the philosophy that the media will 'do' science better when scientists 'do' the media better. It believes scientists can have a huge impact on the way the media cover scientific issues, by engaging more quickly and effectively with the stories that are influencing public debate and the reporting of new scientific research.

Since opening its doors the SMC has grown from two members of staff with an operating budget of around £200,000, to a team of eight with an annual income of almost £600,000. Its day-to-day activities have increased to meet demand, and in the last year the Centre ran 80 press briefings, issued 260 rapid reactions and roundups in response to breaking and upcoming science stories, and handled hundreds of separate media calls and requests. Its services for journalists have expanded, to include "Before the Headlines" statistical analyses of the most complex scientific studies journalists are covering, "Briefing Notes" providing background on the most controversial topics, and fact sheets on novel areas of science. It also offers specialist resources and support to scientists and science press officers when their stories hit the headlines. These include media induction training, horizon scanning, and brain-storming sessions aimed at maximising the science community's effectiveness at engaging with the news media.

The SMC model of an independent press office free from specific institutional messages has also spread to other countries and other subject areas. SMCs now exist in Australia, New Zealand and Canada, and people are exploring the possibility of running similar services in Germany, the US, Africa and China. While there is no formalised global SMC network, existing SMCs work closely together at times of crisis and the media coverage of stories like Fukushima and the Seralini GMO study were covered differently in countries where SMCs ran effective rapid reactions.

In April 2011 the SMC separated from the Royal Institution of Great Britain and became a fully independent charity. This was soon followed by the Centre's 10th Anniversary in 2012. These milestones have seen the SMC grow from strength to strength, building on previous successes and firmly establishing itself as an important fixture in the science

media environment. The Trustees felt that against the backdrop of such developments it was an ideal and appropriate time to reflect on the Centre's first decade of operation, to review its vision, mission and objectives, and to take the opportunity to consult some of its key stakeholders.

The staff and Trustees continually think about strategic questions, and keep challenging conversations going about how best to position the SMC in response to changes in the environment – whether they are opportunities or threats. This includes, but is not limited to, the wider context of changing media and technology, the future of science news and journalism, external pressures for the SMC to adapt or broaden its remit, and the development of international SMCs. As the Centre has grown in success and in profile, the SMC's remit and *modus operandi* have been challenged by a small number of commentators and observers who work within the sphere of science communications (for example, http://www.nature.com/news/science-media-centre-of-attention-1.13362; http://www.cjr.org/the observatory/science media centers the pres.php). The staff and Trustees have valued these criticisms and the debates they have raised, and have considered each of them in detail. They have been extremely helpful in shaping discussions and will help to shape future strategy.

At the very beginning of the review process, the small working party tasked with establishing the terms of this review stated unequivocally that the SMC is setting out its future strategy from an enviable position of strength. They consider that by almost any measure they might apply to test its fundamentals, the results would be positive. These include the state of:

- **SMC Staffing** attractive and highly sought after jobs at the Centre; a track record of high calibre own-grown talent and a passionate and dedicated team; ever-growing numbers of 'SMC alumni' who go on to achieve great things in their careers;
- *Finances and Fundraising* a robust funding model and strong donor loyalty mean the SMC has never been put at financial risk
- **Performance Measures and Outcomes** sustainable growth and diversification in the SMC's outputs that follow from an uncompromising focus on its mission;
- Advisors the SMC attracts and retains an enviable group of loyal volunteers (experts drawn from a wide range of relevant fields) to serve on its Advisory Committee and who act as the best sort of critical friends and remain loyal long after they have left;
- **Reputation** the Centre has a very strong profile after its 10th Anniversary and has gained a host of international followers.

1.2 The Science Media Environment in 2014

Much has changed since the SMC was first set up. Most universities, funders, scientific institutions and professional bodies now employ a dedicated team of press and media officers, many with individual science, health and environment specialisms. In addition to engaging more proactively with the national news media, these organisations also run

their own news sites among other outreach activities, taking full advantage of the opportunities brought by developments in digital technology and new media. Public and media engagement are integral to research grants, and there are increasing numbers of individual scientists who see engaging with the public and media as part of their role and responsibility.

The last decade has seen many changes in journalism, and science journalism specifically. Despite fears, UK science journalism remains relatively strong, having taken full advantage of the opportunities of digital technology and new media. Many news outlets have an expanded online presence, increasing the space and range afforded to science stories. There is greater room for fact boxes, explainers, blogs, podcasts and videos, enabling better engagement with specialist and non-specialist audiences alike. Science coverage is of a broadly high standard and science is generally holding its own in the newsroom, with many science stories staying in the hands of science specialists rather than moving to non-specialists or political reporters, as was much more likely in the early 2000s. While some jobs in UK science journalism have been lost, there have not been huge losses like those seen in the US or Australia. Significantly, the BBC has created a new Science Editor and another senior post in rural affairs.

While the SMC can not lay claim to precipitating these changes, it has played a key role in and reflects this changing science media environment. It has encouraged thousands of scientists to engage more proactively with the national news media, supported hundreds of press officers on some of the most complex and difficult science stories to hit the headlines, and championed the excellent science journalists and science journalism in the UK, enabling them to access the best expertise available in the rapid timeframe required, thus advantaging them in the newsroom.

The SMC has become a voice for the science community on key issues in science and the media, and is viewed by many as a centre of excellence for communicating science to and through the mass media. The SMC gave written and oral evidence to the Leveson Inquiry in 2012 and drafted Guidelines for Science Reporting, which were recommended to newsrooms by Leveson. The Centre also contributed to the BBC Trust Review of Science and has been involved in organising training for journalists and science press officers. It will continue to seek opportunities to improve editorial standards through dialogue with regulators and editors, and has mobilised the science community to sound the alarm when science reporting jobs have been lost or threatened.

Although there have been many developments in science in the media to be celebrated, the Trustees, staff and stakeholders consulted all agree that the need for the SMC remains. The increase in the numbers of stories the Centre works on, led by the demands of the science and media communities alike, demonstrate its continuing importance. Whilst the SMC has encouraged thousands of scientists of the need to engage with the national news media, there remain many more it has not yet reached. Those who are engaged require continued support to be able to stay so, particularly in the more complex and controversial areas of science. Press officers are under increasing pressure in their roles, having to meet the demands of their own institutions and often

being pulled in many different directions in addition to working with the national news media – in academia in particular they are becoming much more strategic and often this means targeting specific groups through specialized media in addition to a mass audience. In addition, stories like climategate, care.data etc. demonstrate that even media-friendly scientists are sometimes still inclined to step back from the fray at the very time when their voices are most needed.

Although science journalism continues to be strong, the number of specialist journalists appears to have reached a plateau or even begun to decline. The broader problem of the media's financial problems threatens science journalism as much as any other area, with many news outlets losing some of their specialists or replacing more experienced journalists with junior colleagues. Demands on journalists are therefore greater than ever, making it even harder for them to leave the office, search out original stories, or meet scientists, thus increasing the pressure to produce several stories each day with fewer resources.

For these reasons the SMC remains a valued resource, for both the science and news media communities. The future clearly holds challenges for continuing to adapt science to the ever-changing form of frontline news for mass audiences; the SMC must focus its resources and strengths appropriately and prepare for whatever challenges that future holds.

1.3 Consultation & Review Process

An informal but extensive strategic review was undertaken during 2012-13. Guided by a small working party (comprising Trustees, Advisory Committee members and staff) it employed several approaches to consult with over 100 key stakeholders of the SMC, and included a number of meetings with Trustees and the Advisory Committee, working group meetings addressing four key areas of strategic review (science, media, organisation and funding), and a wider email survey (with the option of replying anonymously online) of scientists, press officers and journalists who work with the SMC. The full list of people consulted, the results of that consultation, and a list of relevant literature and reports used as reference points for the review can be found in Appendices I & II.

The Trustees and Advisory Committee agreed that it did not matter if the SMC's vision, mission and objectives remained the same following the review, provided that the review process was extensive and clear. (Although it was noted that the SMC now undertakes new activities in addition to those originally envisaged in 2002, and this should be highlighted). However, it was agreed that it *did* matter if some of the SMC's key stakeholders (depending on who they are) misunderstand the vision, mission and objectives of the SMC, and that this review should ensure it addresses this appropriately. Finally, the Trustees and Advisory Committee, whilst acknowledging the importance and need for the SMC to maintain good relations with its stakeholders, suggested that it was most important the SMC communicate its focus clearly and maintain a high standard and culture of professionalism.

2. Specific Areas of Review

Four key areas were examined during meetings and via the email/online survey, and each section below includes the suggestions made by respondents for how the SMC might further improve its work in these areas. These suggestions, along with other key points, were discussed in detail and used to inform the key outcomes of the review which are presented in Section 3.1.

The comments and suggestions made by respondents, along with the reflections on them from the SMC, are summarised in sections 2.1 - 2.4.

2.1 Working with the Science Community

(i) Reaching, supporting and communicating with scientists and other experts

- do more to reach sceptical or silent scientists still not engaged in media work
- communicate more regularly and on a broader basis with scientists
- develop media induction training, step up the levels of issues it addresses
- gain greater and more in-depth knowledge of different areas of science

(ii) Supporting and working alongside press officers

- continue regular updates on new science journalists these are invaluable and greatly appreciated
- be more aware and mindful of the different media strategies of press officers
- communicate more clearly how press officers can suggest or engage in press briefings
- act as a champion for science press officers, supporting their roles and work
- provide more training or avenues for advice about science in the news media
- be more forward-looking and help horizon-scan for upcoming issues

(iii) How the SMC defines expertise

- review the SMC's expert database, including quality of experts and gender balance
- consider drawing up guidelines on how the SMC defines and recruits experts
- produce and maintain a policy and register of conflicts of interest
- don't set out to increase the number of industry experts on the database (the SMC already works with senior scientists and engineers within industry when they can provide expertise, but always as individuals rather than as corporate spokespeople)

- the SMC should not be responsible for verifying the accuracy of comments; it should instead ensure that they are sought from genuine and credible experts
- the SMC should not seek out minority voices, which may undermine the quality of SMC output and promote false balance

(iv) How the SMC defines science

- include natural sciences, medicine, physical sciences, engineering and related disciplines
- review whether expertise should include ethics, policy and social science (for example, when experts in these fields are researching or studying science)
- define science by its capacity to be tested and provide evidence

The great majority of experts (e.g. scientists, engineers, clinicians) and press officers consulted felt that the SMC works well with them, that its communications are useful and generally at the right level, and that the SMC adds value to their individual and institutional media relations efforts. It was interesting to note that many press officers now rely on the SMC for more general, straightforward, "good" science stories and press support. While some scientists and press officers highlighted areas of concern most were happy with the current state of their working relationship with the SMC.

It was clear that one particularly valued aspect of the SMC's role is supporting scientists. During a controversial or breaking story scientists are often required to give multiple interviews to a demanding media. When this is on a sensitive story or in the maelstrom of contentious debate, it can be a daunting experience. Some press offices appreciate the involvement of the SMC even if a story doesn't directly involve their institution, as it's particularly important that their scientists are well supported and offered advice throughout, particularly when they are new to the experience.

2.2 Working with the Media

(i) Rapid reactions: responding to breaking news

- crucial in informing journalists of new and changing angles to a story
- should provide a range of information and expertise from across areas

(ii) Roundups: gathering reactions to new scientific studies

- regularly used by journalists to show editors what is / isn't worth covering (minimising hype and providing context is now a crucial SMC service)
- sometimes perceived as playing down a story
- journalists are happy to be asked if they need a roundup of comments
- could be improved with better formatting or the addition of summaries
- not seen as providing an SMC 'seal of approval' but to indicate what experts are thinking

 consider the need for a firmer policy on working with journals and embargoes (although journalists are already asked to abide by all embargoes)

(iii) Briefing journalists on science

- press briefings are useful as nothing beats face to face meetings
- consider fewer briefings focused on bigger or better stories
- it is fair (and helpful) that niche trade press are not invited to briefings
- consider more in-depth horizon-scanning and briefings looking ahead
- make it more widely known that briefings are recorded
- only a few briefings would suffer poor attendance if audio were made available

(iv) Providing supporting facts and information

- Briefing Notes and Before the Headlines are very useful, produce more
- consider expanding series of SMC fact sheets for similar reasons

(v) Digital technology, graphics and the impact of changing media

- little need to expand twitter or social media, only to reach science community
- could consider occasionally providing video or skeleton graphics if relevant
- not SMC's role to influence how a story is presented or broadcast
- SMC's main role is to provide written factual info and context
- at this stage a log-in section on the SMC website would not be useful

(vi) Which journalists the SMC's services are aimed at

- SMC pilot to widen press list has been successful
- SMC is making good use of new website to share output more widely
- but ultimately the main audience for SMC will continue to be mass media
- best option is still likely to be working with specialists, in most circumstances
- targeting editors and sub-editors is not a realistic possibility
- consider improving relations with generalists, particularly in broadcast outlets
- consider reaching other news and debate programmes, e.g. Question Time
- consider commentators, although caution against trying to influence opinion
- it's best to offer stories to the whole press list rather than by exclusives

On the whole the SMC continues to enjoy an excellent working relationship with the national news media, in particular with the specialist science, health and environment journalists who are the main users of its services. Although it was envisaged when the SMC set up that it would focus its efforts on general and non-specialist journalists, this has proved difficult and counterproductive. However, in many ways the Centre has been able to achieve its aim of raising the profile of science in the newsroom and fostering an

environment of more accurate and evidence-based reporting by supporting and championing the excellent specialist journalists the UK is lucky to have.

Consultation with journalists as part of this review revealed that the SMC is providing services which they continue to find useful and which enable them to cover the more difficult and complex areas of science under the time and resource pressures they face.

It is worth noting that while the SMC is enthusiastic about social media and encourages scientists to use the many new opportunities afforded to them to tell their stories directly to the public, the SMC's focus will remain on the national news media that so often sets the agenda for the debates on social media.

2.3 The Role of the SMC

(i) The role of the SMC

- ultimately for public benefit and informing public debate with evidence
- part of SMC's role is to improve media coverage and understanding of science
- its role with regard to journalists is as a service provider
- the SMC cares about science journalism and will fight for it, but it is not its role to save it
- need to maintain a careful balance between facilitating and influencing
- the SMC now acts as a spokesperson for science in the media

(ii) The focus of the SMC's work

- should remain the mass mainstream media, UK national news outlets
- should remain on controversial, complex, messy, novel science stories
- minimising hype and putting science in context are now a large part of the SMC's work (e.g. roundups)
- it should not be the aim of the SMC to simply "pour cold water" on stories
- consider part of SMC focus to coordinate and support good science stories
- it is a centre of excellence for good practice for science in the media
- consider more horizon scanning given SMC's unique position across science

(iii) Its independence

- independent of any institution, which is crucial to its success
- independent funding model and governance structure
- clear and important brand, but does not care about PR for the SMC itself
- it is not the SMC's job to "do good PR" for science
- whether it is fair to describe the SMC as a press office as it has a number of specific roles
- should defend the scientific process but not areas of research or individuals
- should inform public opinion and debate but not try to change it

- however, still unashamedly pro-mainstream science and the scientific process
- as long as the SMC is reflecting the weight of evidence, it does not matter if it is perceived to be agenda-driven

One of the most challenging and complex discussions that occurred as part of this review was that concerning the role of the SMC: whether it should remain as originally envisaged in 2002, whether stakeholders are clear on what it is (and whether that matters), what the focus of activities should be now and in the future, how the SMC should define itself and its unique role (and how much its uniqueness matters). It is clear that the SMC's different stakeholders have diverse interests, and this was something that was acknowledged and taken into account. While on the surface it is easy to describe the role and function of the SMC, on closer inspection many of the subtleties and nuances of the manner in which it works and where its resources are best placed are more difficult to define.

As clarity emerged during meetings that the SMC should renew its commitment to specific and focused aims, reaction to this was tested via the email and online survey of scientists and press officers. Most agreed it was sensible and reasonable for the SMC take this path and avoid mission creep. However, some cautioned that this would only work if the Centre did not completely ignore "good" or "big" science stories, as there was a concern that only focusing on bad or controversial stories panders to the views of editors and reinforces negative bias about science. Some suggested the SMC would benefit from keeping the door open to allow discussion of any potential briefing, and from clearer communication with others about how it decided which stories to respond to and which briefings to run.

By and large it was felt that the main role of the SMC is to facilitate scientists to engage effectively in contentious and headline debates, and in stories which are reported in an inaccurate or misleading way. While the SMC is not a lobbying organisation, does not advocate for specific technologies or agendas, and is independent of any other institution, it is unashamedly pro science and pro 'mainstream science' in particular. In practices, this means that where scientific opinion is divided, that diversity is reflected in the Centre's output. However, when reflecting the overwhelming weight of scientific evidence on certain controversial subjects, it may at times appear to be agenda-driven. As such it is often called on to co-ordinate the scientific community's media relations efforts when the community is broadly united in its response to an issue. Considering the SMC's goal that the news media should better reflect the weight of evidence and opinion in mainstream science, the SMC will never be a good place for the minority voices or mavericks beloved of the news media.

2.4 Organisation & Funding

(i) Size, growth and structure of the organisation

- growth should be strategic in response to needs or problems, not funding-led

- a change in size would change the ethos of the SMC but this could be managed
- small size means flexible but ultimately it's down to teamwork and staff calibre
- consider all press officers in SMC having key areas of responsibility
- develop a picture of the ideal staff structure the SMC is working towards
- current sense that optimal size is 8-10 members of staff plus volunteer
- consider succession planning for senior staff, Trustees and Advisory Committee

(ii) Funding & resources

- in very good shape, allows the SMC to recruit the best people
- important to independence that SMC does nothing in return for funding, and continue to be clear with all funders that this is the case
- consider an ideal pie chart of funding by sector that it should aim towards
- stick to 5% funding cap or be very clear that some donations exceed it
- increase funding from universities, medical research charities and individual scientists
- consider individual donations for "friends of SMC" payable through website
- increase funding from media, e.g. BskyB, Reuters Foundation, BBC corporate
- reduce proportional reliance on funding from single organisations and industry
- recognise the value of donations in kind, and assign a figure if substantial
- consider building reserves up to two years' running costs
- consider fundraising drives for specific projects
- cost recovery and charging are currently unnecessary, and may affect reputation
- database is a vital resource, which should be invested in and maintained to a high standard
- vision mission statement should reflect funding / editorial firewall

(iii) Measuring impact

- can the SMC quantify the impact it has had on public debate?
- data collection is important but must be focused and for key reasons
- could improve statistics collected, e.g. tone of coverage as well as amount

In order for the SMC to continue building on its successes, and so that it can carry out its objectives as effectively as possible and continue its work into the future, this review identified a need for the Centre to take full advantage of its current strong position and protect its organisational structure, funding and resources; this would also help mitigate the impact of any potential risks ahead.

SMC staff and Trustees are extremely grateful for all of the suggestions, comments and recommendations summarised in sections 2.1-2.4. They are already shaping the SMC's daily operations and will continue to do so in future.

3. A Renewed Focus for the SMC

3.1 Key Outcomes of the Review

This review demonstrates that the need for the SMC very much remains. It also confirms that the SMC is operating from a position of strength, capitalising on its previous achievements and enhanced profile following its 10^{th} Anniversary in 2012. It is crucial, however, that the Centre does not rely on past successes to maintain it, and instead grasps the opportunity to refresh and refocus its mission with both hands. The challenges facing the SMC in future will no doubt be great and it is important the Trustees and staff recognise and prepare for this accordingly. The following lists a number of potential actions and outcomes suggested by the findings of this review.

In the immediate term:

- implement a renewed focus and refreshed mission for the SMC
- communicate this review to stakeholders, updating SMC website and literature
- ensure communications with scientists and press officers sufficient, broad and timely
- communicate more clearly how the SMC decides which stories to work on
- begin drafting and implementing new policies suggested as a result of review (policy on which media can use the SMC; guidelines on how the SMC defines expertise; Register of Interests policy; Regulations on retirement and rotation of Trustees & Advisory Committee)
- focus on the number of press briefings, setting the bar high
- review succession planning for senior staff, Trustees and Advisory Committee
- communicate clearly with funders, let go of those who may want something in return

In the short- to mid-term:

- review further how the SMC defines science, and whether to include ethics, policy etc
- review further what changes in the media landscape mean for the SMC
- review quality and diversity of expertise on SMC database
- consider drawing up guidelines for how SMC defines expertise
- consider sending monthly reports to scientists as well as press officers
- consider expanding press office team and take on areas of responsibility
- develop the SMC's role horizon-scanning for new/complex areas of science
- consider role as champion of science press officers, provide more training and support
- consider expanding/developing Introduction to the News Media training events
- consider offering briefing recording to press officers, and more widely to journalists
- carry out recommendations for a fundraising strategy that better reflects the work of the SMC i.e. more research and media organisations, less industry

- consider expanding journalist services such as Briefing Notes, Before the Headlines etc
- consider providing video or skeleton graphics for journalists when relevant
- develop relationships with generalist journalists, particularly in broadcast
- consider reaching other news and current affairs programmes with science
- develop spread of funding, e.g. reduce industry, increase universities/individuals

In the mid- to long-term:

- consider developing the collection and monitoring of impact data
- develop and work towards ideal staff structure
- develop and work towards ideal funding model and structure

Trustees and staff agreed that some of the areas requiring the most pressing attention following the review include: publishing a concise summary of the review for the SMC's stakeholders (outlining its renewed vision, mission and objectives); further reviewing how the SMC defines science and ensuring its expert database and governing individuals include a range of expertise from across science and engineering; refining the SMC's funding and fundraising model; and undertaking a scoping exercise looking at the future media landscape and how the SMC might prepare for any changes it will bring.

3.2 The SMC's Vision, Mission and Values

One of the key messages to emerge during consultations is that the SMC owes a large part of its success to its uncompromising focus, its independence from any other institution and its commitment to mainstream science. It is therefore the main outcome of this review that the SMC renew its commitment to that focus, perhaps even more strongly than before. As a result it will in future be guided by the following Vision, Mission and Values statements.

What is the SMC?

An independent press office helping to ensure that the public have access to the best scientific evidence and expertise through the news media when science hits the headlines and when new research findings are reported. The SMC:

- is an independent charity working towards the informed and accurate portrayal of science in the media
- is independent of any other organisation
- provides accurate and evidence-based information on the difficult, complex and controversial science stories that are reported in the news media
- represents and promotes the views and opinions of those in the scientific community to the mass media
- is equipped to respond to the needs of the national news media who reach the wider public
- covers all of the natural/physical sciences and engineering

What does the SMC do?

The SMC encourages, supports and facilitates scientists and other experts to engage with the news media when their areas of expertise hit the headlines or their research is controversial, helping the mass media access the best evidence-based science during times of crisis and scientific controversy. The Centre also works to ensure that complex new science is reported in an accurate and measured way, to help ensure that the public recaive a more measured, accurate assessment of scientific claims and better understanding of the stages of research, its wider context and limitations.

The SMCs Charitable Objects

To provide, for the benefit of the public and policymakers, accurate and evidence-based information about science and engineering through the media, particularly on controversial and headline news stories and on reporting of new research findings.

The Centre's primary focus

- The really big science stories that are the headline news of the day (e.g. swine flu, horsemeat, Fukushima).
- Controversial, messy, or politicised science stories, or those with the potential to be misreported (e.g. GM, stem cells, climate change).
- New scientific studies that are either very preliminary or involve complex science
 and stats that are most likely to be sensationalised, overplayed or misrepresented
 (e.g. new study on association between working in a nuclear power station and
 heart disease, new study showing commonly used moisturiser leads to cancer in
 mice).
- Issues where the scientific community want to speak out as one, such as about a possible threat to science or a need for a change in policy (e.g. the threat of cuts to the science budget in the Comprehensive Spending Review, the proposed ban on the use of human animal embryos in research). In these cases, the SMC will often have a role as coordinator.

How does the SMC define science?

The SMC's focus is on the natural and physical sciences, engineering, medicine and related disciplines. It includes not just the results of scientific research and endeavour, but also the issues that impact upon it (political, financial and legal) and those that arise from it (where evidence is misused, ignored or cherry picked). The SMC will sometimes seek the views of social scientists when the subject of their research includes the core areas listed above; and of professional ethicists when ethical questions are central to a story.

How does the SMC define experts?

The SMC considers an expert to be a person who has extensive knowledge and experience in a scientific field and who is accorded authority and status by their peers. This is usually demonstrated through a robust peer-review record in the relevant discipline and a recognised position at a reputable organisation. Occasionally the SMC will put forward experts who are not formally qualified in a scientific discipline but who hold a position of authority within science and represent a larger body of the scientific community.

The SMC always aims to use experts who are closest to the science in a story. If an expert consistently puts campaigning before evidence then the SMC will avoid working with them on that issue. Because one of the Centre's aims is that the news media should better reflect the weight of evidence and opinion in mainstream science, the SMC does not seek out minority views or scientific 'mavericks' whose views would simply reinforce false balance perpetuated by the media. It will, however, reflect differences in opinion within mainstream science.

Who are the SMC's primary stakeholders?

1. The scientific community:

- Encouraging and facilitating scientists, other experts and science press officers to engage with the science stories identified above.
- To help them to get their science into the public domain during times of crisis (*rapid reactions*).
- To encourage and facilitate scientists to play a role in improving the reporting of new findings of importance to the public (*roundups*).
- To help and support researchers to get their own findings reported accurately, especially when they are complex, preliminary, in an already contentious field and need careful communication (*briefings*).
- To help them to inform and influence the media coverage of emerging issues and technologies (*background briefings*).
- To help ensure that scientists have their voices heard on government announcements or other major developments that impact on science (e.g. roundups on the budget and white papers).
- To push them to engage more openly and honestly in media debates on contentious issues where many still fear the media (e.g. animal research and climate change).

2. The mass news media:

- The specialist science news journalists who bring the kinds of science stories identified above to the wider public.
- To help them gain access to the best science in times of crisis (*rapid reactions & emergency briefings*).
- To help them get expert scientific opinion on the significance of new findings (*roundups*).

- To help them access background information and expertise on new and emerging areas (*background briefings*).
- To help them with original reporting and investigations by sourcing scientific experts exclusively on request.
- By running press briefings on new science, which allow journalists the time and space to fully understand the science and implications and limitations of complex new studies.

The SMC will generally:

- Reflect the views of mainstream science and reflect the scientific consensus around where the weight of evidence lies (e.g. on issues like vaccines, GM crops and climate change)
- Reflect differences within mainstream science where those differences are represented by different sets of researchers in mainstream science and in the scientific literature (e.g. on cannabis, bees and pesticides, bisphenol-A).
- Represent the views of mainstream science on issues like government science spending and threats to research from government policy/legislation.
- Continue to focus primarily on the messy, controversial politicised science stories that hit the headlines, the complex new studies in journals that could be poorly reported and misrepresented, and the emerging areas of science and innovation that raise questions of risk and ethics (e.g. synthetic biology, nanotechnology, mitochondrial DNA transfer).
- Source scientists, engineers and clinicians, and other related experts.
- Prioritise national news media with a general audience (*i.e.* general public with no special interest in science).

The SMC will generally <u>not:</u>

- Be a good source of scientific outliers or mavericks who do not publish in the scientific literature.
- Seek out minority views on controversial issues in order to 'balance' its output.
- Work on positive stories and breakthroughs, unless in controversial or headline fields.
- Work on non-controversial issues that are traditionally covered well in the media (e.g. space and dinosaurs).
- Focus on science policy issues such as funding and science policy unless they hit the headlines (e.g. sacking of David Nutt, the Comprehensive Spending Review).
- Source non-scientists (e.g. politicians, patients, NGOs, economists); the SMC's
 main service to the media is to provide journalists with access to the best
 science and scientists on the issue of the day, in the rapid timeframe required by
 its deadlines.
- Prioritise specialist science publications and blogs with a specialist audience (people interested in science)
- Cover non-science stories like politics, education, religion, economics, etc unless there is a strong science angle as described above.

3.3 Looking Ahead

The findings of this review will be used to inform the SMC's strategic objectives for 2014-19. These are yet to be drawn up but may be based around or informed by the SMC's priorities as described on its website:

- Working with journalists and providing them with information about science and its related disciplines; making it easier for them to get access to the best science and scientists when science stories are making the headlines.
- Working with scientists, engineers and other experts, and supporting them to
 engage with the media; creating more opportunities for them to get their voices
 heard on the big science, health and environment stories of the day.
- Supporting press officers when they are working on complex science, health and environment stories.
- In addition, the SMC provides expert advice and evidence on issues relating to science in the media. The Centre often submits evidence to select committee inquiries on science communication in emergencies and public understanding of risk, and in 2011-12 gave both written and oral evidence to the Leveson Inquiry into the culture, ethics and practice of the press.

It was suggested that the SMC's renewed objectives might benefit from being more specific and measurable, and that it was important for the SMC to be able to show evidence of impact (and to know what both success and failure might look like).

At a final meeting bringing the review to its conclusion, Trustees and staff agreed that there had been a number of positive and extremely informative consequences of this review. Firstly, that it had brought clarity to the role and objectives of the SMC, which needed minor amendments rather than sweeping changes; secondly, that it had given Trustees and staff confidence in what the SMC does and a robustness to define and defend its role with external stakeholders; and thirdly, that the SMC must move towards the optimal funding model and by building up its reserves. They also agreed that continual strategic renewal was crucial to the Centre and would bring further benefits, and that future annual away days for staff and Trustees should therefore always include some degree of strategic review.

4. Appendices

- I People Consulted
- II Relevant Literature
- III Current Governance and Staff
- IV Current Funding Structure

Appendix I. People Consulted

Michael Addelman, Press Officer, University of Manchester

Dr Luke Alphey, Chief Scientific Officer, Oxitec Ltd

Becky Attwood, Media Relations Officer, University of Southampton

Daisy Barton, Media Relations Manager, Lancet

Christine Bauquis, Communications Coordinator, European Society for Human Reproduction and Embryology (ESHRE)

Robert Beahan, Media Relations Manager, Institute of Engineering and Technology (IET)

Dr Claire Bithell, Head of Media Relations, Institute of Cancer Research (ICR)

Anna Blackaby, International Press Officer and Faculty of Science Press Officer, University of Warwick

Prof Ian Boyd, Chief Scientific Adviser, Department for Environment, Food and Rural Affairs (DEFRA)

Prof Sir Brian Hoskins, Director, Grantham Institute for Climate Change, Imperial College London

Dr Philippa Brice, Head of Knowledge and Communications, PHG Foundation

Beth Broomby, Assistant Press Officer, Lancaster University

Adrian Bull, Director of External Relations, National Nuclear Laboratory (NNL)

Dr Chris Chambers, Senior Research Fellow, School of Psychology, Cardiff University

Seil Collins, Press Officer, Institute of Psychiatry, King's College London (KCL)

Nick Collins, Science Correspondent, Telegraph

Steve Connor, Science Editor, Independent

Karen David, Media Relations Officer, Spriggs David

John Davidson, Associate Director, Media Relations, National Institute for Health and Care Excellence (NICE)

Shemina Davis, Media Relations Manager, University of Sheffield

Paul Ging, Research Institutes Communications Manager, Durham University

Andrew Gould, The PR Works Limited & Peninsula College of Medicine and Dentistry

Richard Gray, Science Correspondent, Telegraph

Andrew Gregory, Health Correspondent, Mirror

Jenny Hope, Medical Correspondent, Daily Mail

Lisa Horton, Media Relations Manager (Science and Health), University of East Anglia (UEA)

Darren Hughes, Head of Communications and External Affairs, Rothamsted Research

Wendy Jarrett, Chief Executive Officer, Understanding Animal Research (UAR)

Liz Leicester, Media and Communications Manager, Royal College of Psychiatrists (RCPsych)

Fiona MacRae, Science Correspondent, Daily Mail

Natasha Martineau, Head Of Research Communications, Imperial College London

Clare Matterson, Director, Medical Humanities and Engagement, Wellcome Trust

Genevieve Maul, Communications Officer, University of Cambridge

Lord Robert May, University of Oxford, former CSA & former President of the Royal Society

Nick McDermott, Environment Correspondent, Daily Mail

Lawrence McGinty, Science and Medical Editor, ITV News

Nancy Mendoza, Communications Manager, Society for Applied Microbiology (SfAM)

Prof Roger Morris, Head, School of Biomedical Science, King's College London (KCL)

Dr Rebecca Nesbit, Media Relations Officer, Society of Biology

Dr Ben Neuman, Lecturer and Virologist, University of Reading

Sarah Norcross, Director, Progress Educational Trust (PET)

Dr Allan Pacey, Senior Lecturer in Andrology, University of Sheffield & Chair, British Fertility Society (BFS)

Thomas Parkhill, Freelance PR Consultant

Tim Parry, Head of Communications, Alzheimer's Research UK

Vicky Passingham, Communications and Events Officer, University of Essex

Prof Joe Perry, retired Consultant in Ecology & Biometry

Prof Chris Pollock, Honorary Research Professor, Aberystwyth University

Prof Jules Pretty, Deputy Vice-Chancellor and Professor of Environment and Society, University of Essex

Emma Reynolds, Press Officer (Health and Society), King's College London (KCL)

Hetan Shah, Executive Director, Royal Statistical Society (RSS)

Prof David Spiegelhalter, Winton Professor of the Public Understanding of Risk, University of Cambridge

Dr David Stainforth, Senior Research Fellow, London School of Economics (LSE)

Toby Stead, Press Officer, Society for Endocrinology

Chris Stone, Press Officer, Keele University

Dr Peter Stott, Head of Climate Monitoring and Attribution, Met Office Hadley Centre

Martyn Thomas, Fellow of the Royal Academy of Engineering (FRAEng) & Director and Principal Consultant, Martyn Thomas Associates Limited

Amanda Thomson, Communications & Research Manager, Action on Addiction

Richard Tibenham, Media Relations Manager, Engineering and Physical Sciences Research Council (EPSRC)

Carmel Turner, Chief Press Officer, Medical Research Council (MRC)

Adrian Van Klaveren, Controller, Great War Centenary, BBC & former Deputy Director of BBC News and Controller, BBC News Production

Simon Wilde, Associate Director, External Affairs, National Institute for Health and Care Excellence (NICE)

Robin Wilkinson, Media Manager R&D, Guy's & St Thomas' NHS Foundation Trust

Joe Winters, Senior Press Officer, Institute of Physics (IOP)

Dr Jonathan Wood, Press Officer, Medical Sciences, University of Oxford

Peter Zarko-Flynn, independent communications consultant

Plus 36 anonymous respondents to online survey.

SMC Trustees and Advisory Committee members were also involved in the consultation process, some at considerable length.

SMC Trustees

Dr Peter Cotgreave (Chair), Director of Fellowship and Scientific Affairs, Royal Society Marshall Davies (Treasurer), Former President of the Royal Pharmaceutical Society Philip Greenish, Chief Executive, Royal Academy of Engineering

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Tom Miller, Director of Communications and Development, Imperial College London

Alex Denoon, Partner, Lawford Davies Denoon

Dr Helen Munn, Executive Director, Academy of Medical Sciences

Jonathan Baker, Head of Newsgathering, BBC

SMC Advisory Committee

Kenny Campbell, Editor, Metro Dr Philip Campbell, Editor-in-Chief, Nature Clive Cookson, Science Editor, Financial Times Louise Dunn, Vice President Global R&D Communications, GlaxoSmithKline
Carolan Davidge, Director of Press & PR, Cancer Research UK
Lord Paul Drayson, Entrepreneur and former Science Minister
Prof Robin Lovell-Badge, Head of Developmental Genetics, MRC National Institute for Medical
Research

Rebecca Morelle, Science Reporter, BBC News
Simon Pearson, Obituaries and Letters Editor, The Times
Dr Simon Singh, Science writer and broadcaster
Bob Ward, Policy and Communications Director, LSE Grantham Research Institute on Climate Change

The results and summary findings of all email and anonymous online consultations have been recorded by the SMC.

Appendix II. Relevant Literature

- SMC Original Consultation Report (2002)
 http://www.sciencemediacentre.org/wp-content/uploads/2012/09/Science-Media-Centre-consultation-report.pdf
- SMC 10th Anniversary Literature: Views from the Front Line (2012) http://www.sciencemediacentre.org/10-year-anniversary/
- SMC Website http://www.sciencemediacentre.org/
- SMC Annual Accounts 2012-13 (2013)
 http://www.sciencemediacentre.org/wp-content/uploads/2013/10/SMC-Annual-Reports-and-Accounts-2012-13.pdf
- Mapping the Field: Specialist science news journalism in the UK national media – Research by Cardiff University (2009) http://cardiff.ac.uk/jomec/resources/Mapping Science Journalism Final Report_2003-11-09.pdf

Appendix III. Current Governance and Staff

SMC Trustees

Dr Peter Cotgreave (Chair), Director of Fellowship and Scientific Affairs, Royal Society Marshall Davies (Treasurer), Former President of the Royal Pharmaceutical Society Philip Greenish, Chief Executive, Royal Academy of Engineering Tom Miller, Director of Communications and Development, Imperial College London Alex Denoon, Partner, Lawford Davies Denoon Dr Helen Munn, Executive Director, Academy of Medical Sciences Jonathan Baker, Head of Newsgathering, BBC

SMC Advisory Committee

Kenny Campbell, Editor, Metro
Dr Philip Campbell, Editor-in-Chief, Nature
Clive Cookson, Science Editor, Financial Times
Louise Dunn, Vice President Global R&D Communications, GlaxoSmithKline
Carolan Davidge, Director of Press & PR, Cancer Research UK
Lord Paul Drayson, Entrepreneur and former Science Minister
Prof Robin Lovell-Badge, Head of Developmental Genetics, MRC National Institute for Medical
Research

Rebecca Morelle, Science Reporter, BBC News Simon Pearson, Obituaries and Letters Editor, The Times Dr Simon Singh, Science writer and broadcaster Bob Ward, Policy and Communications Director, LSE Grantham Research Institute on Climate Change

SMC Staff

Fiona Fox, Chief Executive
Dr Helen Jamison, Deputy Director
Selina Kermode, Development and Office Manager
Dr Ed Sykes, Head of Mental Health & Neuroscience
Tom Sheldon, Senior Press Officer
Dr Fiona Lethbridge, Press Officer
Robin Bisson, Science Information Officer
Alice Kay, Press Office Assistant

Appendix IV. Current Funding Structure

The SMC's funding model is designed to reflect its position as an independent press office that is not linked to specific institutional interests. As such the Centre seeks donations from a wide variety of organisations with an interest in the accurate reporting of science in the mass media, including scientific institutions, science-based companies, charities, media organisations and government. See below for the list of funders.

The Centre is independent from its funders who do not gain influence over the SMC's work in return for their financial support. To protect the Centre from any undue influence the SMC caps donations from any one institution at 5% of annual income. The SMC's Trustees and Advisory Committee have agreed on a small number of exceptions to the 5% upper limit on donations. These exceptions are large trusts like the Wellcome Trust and Drayson Foundation.

The aggregate of public money from government and government funded bodies can also exceed 5%. This allows the SMC to accept funds from different science based departments in central government, from research councils and from arm's length organisations, while the 5% upper limit continues to apply to each individual body.

In addition to core funding the Centre accepts support from some funders for specific projects. For instance, the Department for Business Innovation and Skills has covered the costs of two Introduction to the News Media events per year in addition to their contribution to the Centre's core costs and the Science and Technology Facilities Council which funded the position of events officer at the Centre in 2012-13.

The total income for the Science Media Centre for 2012-13 was £591,884. The 5% upper limit for donations for 2013-14 is £30,000.

List of Funders (to date: August 2013)

AbbVie

Agriculture and Horticulture Development Board

Airwave Solutions

Alzheimer's Research UK

Association of the British Pharmaceutical Industry

Association of Medical Research Charities (AMRC)

AstraZeneca

BASF

Baver Plc

Biochemical Society

Biotechnology & Biological Sciences Research Council (BBSRC)

BP International Ltd

Bristol University

British Heart Foundation

British In Vitro Diagnostics Association

British Pharmacological Society

British Psychological Society (BPS)

British Retail Consortium

Cancer Research UK

Cardiff University

Chartered Institution of Building Services Engineers

Chemical Industries Association (CIA)

Chilled Food Association (CFA)

Coca-Cola

Colgate-Palmolive

CropLife International

Department for Business, Innovation and Skills (BIS)

Diamond Light Source

DMG Media, including Daily Mail, The Mail on Sunday, Metro and MailOnline

Elsevier BV

Engineering & Physical Sciences Research Council (EPSRC)

EUK Consulting

European College of Neuropsychopharmacology

Food and Drink Federation

Food Standards Agency (FSA)

The Gatsby Charitable Foundation

GE Healthcare

GlaxoSmithKline (GSK)

Human Fertilisation & Embryology Authority

Human Tissue Authority (HTA)

Imperial College London

Institute of Mental Health

Institute of Physics (IOP)

Institute of Physics and Engineering in Medicine

Institution of Chemical Engineers (IChemE)

Institution of Civil Engineers

Institution of Engineering and Technology (The IET)

Institution of Mechanical Engineers (IMechE)

John Wiley & Sons Inc

King's College London

L'Oreal UK

Life Technologies

Medical Research Council (MRC)

Mental Health Foundation

Mental Health Research Network

Mental Health Research Network Cymru

Merck Sharp & Dohme (MSD) Limited

The Met Office

Mobile Manufacturers Forum

Mobile Operators Association (MOA)

MQ: Transforming Mental Health

National Grid

National Institute for Health and Clinical Excellence (NICE)

National Institute for Health Research

National Nuclear Laboratory

Natural Environment Research Council (NERC)

Nature

Newcastle University

Novartis

Nuclear Decommissioning Authority (NDA)

Nuclear Industry Association

Oxitec

Proctor & Gamble

PR Works

Research Councils UK (RCUK)

Rolls-Royce

Royal Academy of Engineering

Royal Pharmaceutical Society

The Royal Society

Sanofi

Science and Technology Facilities Council (STFC)

Scottish Mental Health Research Network

Smith & Nephew

Society for Applied Microbiology (SfAM)

Society for General Microbiology (SGM)

Society for Radiological Protection

Society of Biology

Maudsley Charity

Springer science+business media

Syngenta

Technology Strategy Board

UK Cleaning Products Industry Association (UKPCI)

UK Energy Research Centre

University College London

University of Bristol

University of Cambridge

University of East Anglia

University of Oxford

Wellcome Trust

For a list of previous funders see: http://www.sciencemediacentre.org/about-us/funding/