MESSAGE

Medical Science Sex and Gender Equity

Whole-sector implementation of policies to improve the integration of sex and gender in UK biomedical, health and care research

Policy Lab 3 - 31st January 2024

The George Institute for Global Health   UK

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1. Executive summary

On 31st January 2024, the MESSAGE project hosted an online Policy Lab to answer the question:

What are the practical steps the UK research sector, working individually and together, can take to implement sex and gender policies?

Invited participants included **funders, regulators, publishers, patients and people with lived experience of different sexes and genders, researchers, clinicians and government officials**. The online event followed two previous hybrid Policy Labs, in which the same group had articulated a **vision** for improved integration of sex and gender in UK biomedical, health and care research, and had co-designed best practice in the form of a sex and gender **policy framework** for research funders.

During Policy Lab 3, participants were split into small groups to discuss specific questions regarding implementation of sex and gender policies. Discussions focused on the steps needed to embed new policies within funder granting systems, tools and materials needed to support implementation, and a sector-wide timeframe and milestones for change.

Two key learnings from the Lab were:

1. **Implementation goals should be flexible to individual organisations' capacity while remaining ambitious**

   Stakeholders underlined the importance of rolling out sex and gender policies in a way that **did not sacrifice quality,** and that the length of time needed for this would vary by organisation. This would depend on capacity and challenges related to their specific field and the type of research that the organisation supports. Stakeholders highlighted the need to **embed points for reflection** on progress throughout the implementation process, and that monitoring and evaluation plans should be integral to decision-making around implementation.

The group highlighted the need for **persistent messaging and advocacy** to showcase the importance of this change for all dividuals that comprise the the UK research ecosystem. Dedicated efforts would also be needed to **onboard publisher, regulator and research institute staff.**

2. **Co-designing implementation tools will accelerate uptake and ensure consistency across the research sector**

   Embedding nudges related to sex and gender throughout the granting process is essential to draw applicants' attention to the fact that funders take this component of applications seriously. Including a question on sex and gender in the **application form** is a key lever for change, and this must be supported by **guidance materials for researchers and reviewers** on what comprises poor, adequate and high-quality integration of sex and gender. Processes must be put in place to **monitor and evaluate applicants' responses and wider progress,** both for individual funders and across the research sector as a whole.

Funder stakeholders received the finalised MESSAGE policy framework in April 2024 and began implementation processes at this stage. Progress will be discussed at the final MESSAGE Policy Lab on 1st October 2024, during which participants will pay particular attention to **monitoring and evaluating policies,** and will discuss **the longer-term sustainability and responsibilities** of the MESSAGE consortium.

The MESSAGE team is preparing guidance materials for researchers and funders to be hosted on the project website: www.messageproject.co.uk. The MESSAGE policy framework will be launched publicly in autumn 2024.

2. Introduction

2.1 MESSAGE stakeholders have co-designed a sex and gender policy framework for UK funders

In 2023, the Medical Science Sex and Gender Equity (MESSAGE) project ran two hybrid (online and in-person) Policy Labs on improving the integration of sex and gender in biomedical, health and care research in the UK. Lab attendees included funders, regulators, publishers, patients and people with lived experience of different sexes and genders, researchers, clinicians and government officials.

During the first Lab, the group articulated a vision for improved integration of sex and gender in biomedical, health and care research, emphasising the need for **whole-sector action, capacity building and culture change.** During the second Lab, the group reviewed and provided feedback on a **draft sex and gender policy framework.** The MESSAGE team updated the framework based on the group's feedback, and finalised the framework in April 2024. This framework is now best practice for sex and gender policies adopted by UK researcher funders.

2.2 Whole system change necessitates individual and collective action

During Policy Lab 1, the stakeholder group was clear that **funders must be the first group** in the research pipeline to adopt sex and gender policies. Over time, other actors (publishers, regulators and research institutes) should reflect funder stipulations in their expectations of researchers and the research that they produce. Evidence indicates that funder policies have a positive effect on how funding applications account for sex and gender, but that improvements to how research is reported are less clear-cut. Building **accountability mechanisms throughout the research pipeline** will be important for ensuring funder policies are effective and that MESSAGE's unique whole-sector methodology truly accelerates impact in this way.

2.3 The MESSAGE project ran a Policy Lab in January 2024 to identify the practical steps needed to roll out sex and gender policies across the UK research sector

On 31st January 2024, MESSAGE held a third Policy Lab, convening the same group of stakeholders that had attended the two previous Labs. 48 participants attended the Lab, which was held online. This Lab sought to answer the question:

What are the practical steps the UK research sector, working individually and together, can take to implement sex and gender policies?

Ahead of the event, the MESSAGE team designed a **roadmap for change**, which was shared with participants as part of the briefing materials. Part 1 of the roadmap covers the practical steps to be taken by individual funding organisations to implement sex and gender policies. This part covered the **first two years** of implementation work, with the expectation that a policy would be rolled out at around the 12-month mark.

The practical steps for individual organisations were grouped into 5 key areas, which were reviewed by 5 groups of participants at the Lab:

- Designing the application process
- Guidance for researchers
- Support for reviewers
- Evaluation mechanisms
- Engaging hearts and minds

Part 2 of the roadmap focuses on **how publishers, regulators and research institutes might reflect funder policies** in their expectations of researchers over a **5-year period.**

It also sets out milestones for all actors across the pipeline to achieve in this time. **Milestones for progress** were established across the period with a view that, after 5 years, research applications which do not adequately account for sex and gender will be **rejected.** This part of the roadmap was reviewed by two small groups, one comprised of publisher stakeholders and the other of regulator stakeholders.

Another session focused on the design of tools needed for effective implementation of sex and gender policies.

Participants were split into 7 small groups to review draft tools for implementation:

- Wording of application form question(s)
- The structure of guidance for researchers
- An evaluation matrix for assessing the integration of sex and gender in applications
- Metrics for monitoring and evaluating policy implementation
- Responses to frequently asked questions

In summary, key learnings from the Policy Lab were:

1. Implementation goals should be flexible to individual organisations' capacity while remaining ambitious

- Different timeframes and milestones are achievable for different types of organisation
- Additional practical steps for funders should centre on timepoints for reflection, field-specific support and budget planning
- Implementation plans should consider monitoring and evaluation from the outset
- Campaigning approaches should be used to engage hearts and minds
- Dedicated efforts are needed to initiate change among publishers, regulators and research institutes

2. Co-designing implementation tools will accelerate uptake and ensure consistency across the research sector

- Embedding a sex and gender question in the funding application form is key for initiating change
- Guidance materials must give researchers the confidence and impetus to embed this change in their research practice
- Nudges must support application reviewers to recognise that integration of sex and gender is part of research excellence
- Monitoring and evaluation of progress in specific fields and across the sector as a whole is important

3. Implementation goals should be flexible to individual organisations' capacity while remaining ambitious

3.1 Different timeframes and milestones are achievable for different types of organisation

Participants felt that the roadmap's 5-year timeframe and associated milestones were ambitious. Some stated that this provided useful momentum, giving them **targets to aim** for, while others suggested that strict timeframes might alienate some researchers, and that emphasis should be placed on a **high-quality endpoint rather than fast roll-out**. Some funders flagged that they may not have capacity and resources to implement all of the practical steps needed, and it would be useful to be provided with a list of possible outputs to work towards. One participant underlined the importance of **policies and guidance that could be adapted over time in response to new learnings** which would recognise that there will be trial and error in the process. Another recommendation was to embed more milestones for gathering feedback and evaluating success.

Several participants flagged that policy change would need to align with annual budgets, which means that many funders would not be able to begin rollout until the **start of the next annual budget in 2025.** Some felt they would need more than 12 months to obtain sign-off and implement policies in full. In particular, funders felt that more time would be needed to develop **field-specific guidance and training,** as well as for **university and research administrator structures to respond** to new policies in their systems and processes. One group suggested that the roadmap timeframe should **retain the phases but remove a precise timeframe** for completion in terms of months.

3.2 Additional practical steps for funders should centre on timepoints for reflection, field-specific support and budget planning

The first part of the roadmap focuses on the **practical steps to be taken by funder staff** to implement a sex and gender policy. Five groups reviewed this section of the framework, and made suggestions for additional steps to embed in the roadmap. These include:

- Reviewing and adapting funding budgets as needed to account for potential cost increases
- Undertaking a cross-referencing activity to ensure this policy is aligned with, and potentially embedded within, other organisational policies
- Consulting with the research community to hear researchers' concerns and identify field-specific challenges
- Generating resources and facilitating opportunities for researchers to engage with previously underserved sex and/or gender groups in each specific field
- Ensuring language around sex and gender is consistent across the organisation
- Holding discussions about specific funding to support sex- and gender-focused research
- Communicating policy changes to universities and research institutes with sufficient time for research administrators (who review funding applications before they are submitted to funders) to adapt and update their processes

3.3 Implementation plans should consider monitoring and evaluation from the outset

A number of suggestions related to monitoring and evaluation of implementation:

- Ensure that they are aware of and understand the changes
- Dedicating time to integrating feedback from applicants after a pilot period, as well as after the first year of implementation
- Gathering data on cost and budget changes to inform future policy implementation
- Introducing opportunities for communicating progress as it is achieved

Some funders thought that **establishing a baseline** of how sex and gender are accounted for in applications would be a useful benchmark from which to measure future impact, which could be done through a retrospective assessment of current applicants. However, others thought that, given applications have not been asked to comment on sex and gender until now, this would be challenging and resource intensive. For these funders, **beginning to collect data one year after** policy implementation would be preferable.

3.4 Campaigning approaches should be used to engage hearts and minds

Ensuring meaningful adherence to policies that **is not simply a tick-box exercise** requires effort to engage individuals on the importance of this change and its value for the quality of their work and research. The first Policy Lab highlighted different rationales for this, including scientific rigour, ethical good and economic benefit, as well as how these rationales might resonate with different audiences. The MESSAGE group is mindful that sex and gender can be controversial in public debate and that there is anxiety amongst research professionals and the public about making **inadvertent mistakes** when discussing sex and gender.

Critical questions are often asked regarding sex and gender and, as such, preparing responses in advance, drawing on the expertise of the Policy Lab group, would be valuable.

Policy Lab participants reflected on the need for **persistent and consistent messaging** on this topic, citing the idea that people may need to hear a message seven times before they react to it. Overall, time would be needed to generate buy-in among senior leaders and the research community. Supporting individuals within funding organisations to act as **Sex and Gender Champions**, tasked with raising this conversation within their own institutions, would be one way to achieve this. Likewise, **larger organisations publicly showing their support for and leadership regarding these changes** would help to bring about this sector-wide shift.

The stakeholder group highlighted the value of **using both scientific evidence including statistics and real-world stories such as patient testimonies,** to make the importance of this work resonate with their different audiences. They underlined the need for key messages to be tailored to specific interests and fields so that they resonate with individuals – whether professional groups or members of the public - and avoid "change fatigue". They felt that the intensifying discourse around health inequalities would motivate individuals. The group emphasised the need to demonstrate that improved accounting for sex and gender will **benefit all people, including men as well as women and minoritised sex and gender groups**. Moreover, **success stories from different stakeholders** would also be beneficial, and participants highlighted the value of all organisations sharing learnings from their implementation of policies and attempts to generate buy-in.

3.5 Dedicated efforts are needed to initiate change among publishers, regulators and research institutes

Publisher and regulator representatives indicated that there is support for change to improve accounting of sex and gender within their organisations, but that dedicated efforts would be needed to engage and upskill staff. Among publishers, **work is needed to ensure journal editors recognise the integration of sex and gender as a component of research excellence;** this is more challenging when editors are external rather than in-house, which is typical for smaller journals. Representatives highlighted that **scoring tools would be needed to help editors and peer reviewers** to assess whether a manuscript has adequately accounted for sex and gender, but underlined that greater consistency would be achieved if **responsibility for assessing scores sat with editors rather than reviewers.** One participant wondered if an AI tool could be created to meet this need.

Publisher representatives indicated that a timeframe of approximately 6 years would be needed to reach a point where research papers which do not adequately account for sex and gender are rejected. Regulator representatives suggested that their organisations' actions could be joined up with funders sooner than 6 years, but that **it would take 5 years to embed changes, as projects can take 5 years to be completed** once they have received funding. Regulators indicated that in the short term it would be difficult to reject applications which do not adequately justify their approach regarding sex and gender, due to the paucity of existing literature against which to benchmark researchers' justifications.

4. Co-designing implementation tools will accelerate uptake and ensure consistency across the research sector

4.1 Embedding a sex and gender question in the funding application form is essential for initiating change

There is recognition that **consistency across funder application forms regarding how to ask about sex and gender** would reduce the administrative burden for researchers in responding to this question and ensure clarity. The design of the application form question is also important for funders to be able to gather data on how researchers are responding to this requirement, which will in turn feed in to improving sex and gender policies in the future.

Policy Lab participants articulated the need for a balance between minimising the number of application form questions and ensuring that the design of questions captures sufficient detail. Participants agreed that **a question asking broadly about equality, diversity and inclusion would not be adequately nuanced** to ensure sex and gender are robustly accounted for, and that specific details on sex and gender should be integrated in this question/series of questions. Participants highlighted the central importance of asking researchers to provide a **justification** for why they have or have not accounted for sex and gender. It was deemed important that applicants fill out a **descriptive box** about how they are accounting for sex and gender, and that **a single box** (rather than several) would prevent duplication of content across boxes, which could encourage disengagement with the question. Participants showed a preference for wording of "how have you **considered** sex and gender". The policy framework is not prescriptive about how to justify the inclusion of sex and gender; it is incumbent on each researcher to reflect on how sex and gender are relevant to their specific question in the context of their field and existing research.

4.2 Guidance materials must give researchers the confidence and impetus to embed this change in their research practice

Detailed guidance and examples will be essential to help researchers understand policy expectations and put them into practice in their own work. The MESSAGE team will curate the best of existing resources and prepare new guidance materials over the course of 2024 in the form of a pre-clinical and clinical handbooks which will be freely available on the MESSAGE website.

Policy Lab participants emphasised the need to frame the guidance in a way that **gives researchers confidence** to make changes to their research practice. Reassurance about cost implications will be key to this. The focus of guidance should be on **improving researchers' existing and future work** rather than implicitly criticising past research. Participants agreed that **separate guidance for pre-clinical and clinical** researchers would be user-friendly, but flagged that addressing the breadth of health conditions, each with their own considerations, could be a challenge and may inadvertently cause confusion. One suggestion to counter this was to **nominate champions** within organisations or for specific disease/condition areas who can point researchers to resources specific to that area. Participants emphasised the need to be **clear about the scope of the handbook**, and to set out the **terminology** it would use from the outset. Usability would be improved by highlighting the **one key takeaway from each section**, or the **one key section to read. Several case studies** should be included in the handbooks to highlight best practice and the value of accounting for sex and gender to a high standard, as well as detailing **typical mistakes** that researchers should strive to avoid.

Likewise, a section on common **misconceptions** would be helpful. Including examples of how poor accounting of sex and gender **impacts on patient experiences and outcomes** would also be beneficial. Guidance for asking questions about sex and gender in a **trauma-informed way** would be particularly valuable researcher stakeholders said, as would suggestions for **how to engage with and recruit people of different sexes and genders.** Participants suggested that a decision tree tool for helping researchers identify if a study should account for sex and/or gender would be useful, and that guidance should be provided for **when sex assigned at birth could be used as a proxy measure of sex** in the absence of participant data about a particular sex characteristic.

4.3 Nudges must support application reviewers to recognise that integration of sex and gender contributes to research excellence

Reviewers play a pivotal role in the implementation of sex and gender policies. Researchers are more likely to meaningfully engage with an application question on sex and gender if they know that reviewers will take their response into account in the application's overall score and will offer robust, helpful feedback on the quality of their answer to this question. Reviewers must therefore be **upskilled to evaluate high-, mid-and poor-quality integration of sex and gender in applications**. A clear framework for evaluating this component of applications will ensure there is consistency in how applications are judged, and how the score attributed to the sex and gender component should affect the application's overall score.

Policy Lab participants recommended that **training for peer reviewers on sex and gender** should become the norm, as is the case for research governance. However, this would be more challenging for organisations which use external reviewers, as is typical for smaller charitable funders.

Stakeholders highlighted that it would be useful to write a checklist of questions about the different components of accounting for sex and gender as a **set of prompts for reviewers**, even though reviewers shouldn't be expected to provide detailed feedback on each individual component. Assessment of the integration of sex and gender could also be **embedded throughout reviewer feedback forms**, such as in sections on statistics or responsible use of animal subjects. For pre-clinical research, stakeholders recommended researchers draw on the Sex Inclusive Research Framework. Participants questioned if a **statistician with expertise on sex and gender** considerations would be needed to review applications, highlighting that there are not currently sufficient numbers of such experts for this to be feasible across the UK. They also underlined that different and specific guidance would be needed on how to assess the integration of sex and gender in applications for **qualitative research**.

Participants were clear that integration of sex and gender should be considered as part of reviewers' assessment of research **"excellence"**, given that it is essential for rigour and generalisability. One participant suggested using a **"RAG" (red, amber, green) rating system**, which has been used successfully by a funder which already assesses the integration of sex and gender. Another participant recommended a **1-5 scale with examples** of what would be needed to satisfy each point on the scale. Some participants suggested that at first, applications should be assessed for whether they have responded to the sex and gender question (in a yes/no format) and that once this is embedded over a funding cycle, **once more knowledge has been generated,** then **the quality of applications can be assessed.**

However, others felt that reviewers would be able to distinguish between poor, good and excellent integration of sex and gender integration from the first year of implementation. The group emphasised that reviewers should focus particularly on **how researchers justify** their choices around sex and gender accounting.

Though some participants suggested guidance for researchers should include **examples of high-quality responses** to questions on sex and gender, some felt that this would not be appropriate. One participant flagged that assessing high-quality integration of sex and gender would be more challenging for funders that do not focus on a **specific disease or condition**. One participant suggested that, over time, funders could integrate a review of how researchers have accounted for sex and gender **in recent publications** to inform award decisions.

4.4 Monitoring and evaluation of progress in specific fields and across the sector as a whole is important

Regular, ongoing monitoring of policy implementation is essential for understanding **which actions are working, and which areas need to be improved or prioritised.** Development of a monitoring and evaluation plan before and during policy implementation will support organisations to measure impact effectively and to establish a baseline against which to evaluate future progress. **Use of similar metrics** across the research sector will simplify later comparison across organisations, disease areas, and different stages of the research pipeline.

Policy Lab participants identified the value of **quantitative measures** to evaluate policy implementation and show impact, but they recognised that it is **difficult to standardise evaluation** of how well research accounts for sex and gender. They underlined that metrics should be **designed in tandem** with application form questions and the scales or matrices used by reviewers to assess applications. Some participants flagged that it would be preferable to conduct

a **baseline of applications' standards from one year after policies are rolled out**, as data would not have been collected on key metrics at that point. However, others recommended that organisations conduct a **retrospective audit of previously funded research** ahead of policy rollout, particularly to identify areas where researchers may already be accounting for sex and gender, however well or poorly.

Participants highlighted that funders have limited control over, and limited ability to monitor, the outputs of the research that they fund. They suggested that **bibliometric analyses** could be used to track how outputs account for sex and gender. They also wondered whether existing systems used to track research outputs, such as **ResearchFish,** could add a question on sex and gender inclusion. Participants flagged that expectations for **small charities** which only fund one or two pieces of research per year may need to differ from larger, better-resourced organisations with more members of staff.

Some participants reflected that it would be challenging to identify which organisations' policy was impacting on research practice. The group suggested a mechanism should be set up to **capture data on and demonstrate change across the sector as a whole**, rather than to track change in individual organisations. One metric of success for whole-sector action would be the number of funders who have adopted a sex and gender policy or made changes to their application form. Other metrics of impact could focus on the **degree to which the research workforce is upskilled** in accounting for sex and gender, such as by capturing how many researchers enroll in and complete training programmes and courses. Participants highlighted that it would be valuable to **include metrics on how well applications for funding and the resulting research account for trans and I/VSCs participants**. It was felt that further work would be needed on how to capture that data in consultation with patients and expert groups.

5. Conclusion

What are the practical steps the UK research sector, working individually and together, can take to implement sex and gender policies?

During the third MESSAGE Policy Lab in January 2024, stakeholders from across the UK biomedical, health and care research sector came together to discuss implementation of sex and gender policies based on the co-designed MESSAGE policy framework. The event focused on **actions to be taken by individual funders** as well as **a timeframe for collective action** from the sector as a whole.

Policy Lab discussions highlighted **the value of being ambitious** in striving for this change, but also the need to **tailor expectations and timescales** to individual organisations. The group highlighted the need to introduce opportunities for feedback and reflection throughout the process, and to consider ways to measure and **highlight progress at the individual funder level as well as the whole-sector level.** Advocacy efforts will be needed to generate buy-in for this change from senior leaders, researchers, and staff based at funders, regulators and publishers who shape research.

The Policy Lab group discussed the content of implementation tools that will be needed to support policy implementation, which the MESSAGE team will prepare as resources to be shared on the MESSAGE website. In particular, participants recognised the need for a supportive, non-punitive tone to these resources, and the **critical role played by application reviewers** in making funder policies a success by encouraging good practice. **Use of similar questions in application forms, resources and metrics of success** across the research sector will ensure consistency and reduce the administrative burden on researchers, leading to improved confidence in and uptake of new policies.

In summary, the key learnings from the Policy Lab were:

1. Implementation goals should be flexible to individual organisations' capacity while remaining ambitious.

2. Co-designing implementation tools will accelerate uptake and ensure consistency across the research sector.

6. Next steps

The MESSAGE project will hold a **final hybrid Policy lab in October 2024,** focused on measuring the success of policies and sustaining collaboration on and progress in integration of sex and gender in research. This will be focused on issues regarding monitoring and evaluation, framed with an emphasis on learning, sustainability and growth of the MESSAGE movement in the UK.

The MESSAGE policy framework was finalised in April 2024 and shared with funder stakeholders to begin implementation, drawing on the practical steps outlined in the roadmap which was shared with participants during the third Policy Lab. **The framework will be launched publicly in autumn 2024.**

The MESSAGE team is preparing guidance materials for researchers and funders, which will be hosted on the project website: www.messageproject.co.uk. **Guidance for funders will be in the form of a toolkit identifying the stages in the granting process where funders can embed nudges, questions and response boxes** about integrating sex and gender.

The MESSAGE team will provide suggested application form questions and a matrix to use when reviewing how well applications account for sex and gender.

Guidance for researchers will focus on translating policy stipulations into practice, with an emphasis on what should be done **to account for sex and gender at each stage of the research cycle.** This guidance will be summarised in two handbooks: one for clinical researchers and another for pre-clinical researchers. The MESSAGE team has also created a **curated database of best practice sex and gender research across** a large number of research fields, which will be launched on the project website in autumn 2024.

The MESSAGE team will **continue to advocate for change** among researchers, sector leaders, government officials and funders, and will be actively seeking opportunities to 'spread the MESSAGE' through speaking engagements, presentations, and training opportunities.