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Minutes of the Council business meeting held on 7 December 2022

Attendees		
MRC Council	Executive Board	Presenters/Guests
John Iredale (Chair)	Rob Buckle	Gavin Mapstone
Lucy Chappell	Hugh Dunlop	Nathan Richardson (Items 7&8)
Kim Graham	Claire Newland	Ian Viney (Item 10)
Roger Highfield	Jonathan Pearce	Buddhini Samarasinghe (Item 11)
Precious Lunga	Susan Simon	Katherine Pitrolino (Item 11)
Jill Pell		
Munir Pirmohamed	MRC Head Office/Observers	
Andy Richards	Ivan Pavlov	
Eleanor Riley	Simone Bryan	
Graham Spittle	Kathryn Jackson	
Irene Tracey	Jo Latimer (Item 7)	
Pauline Williams	Paul Colville-Nash (Item 8)	
Louise Wood		

1. Welcome and Apologies

The Council business meeting on 7 December 2022 was held at Double Tree by Hilton London Angel Kings Cross with some members joining via Zoom videoconference.

Apologies were received from Richard Murley, Isobel Stephen, Patrick Chinnery.

In the absence of the Senior Independent Member, Mr Richard Murley, the meeting was chaired by Professor John Iredale.

Some members, guests and observers joined the meeting virtually.

Professor Iredale welcomed Professor Lucy Chappell, who joined MRC Council as an ex-officio member, representing Chief Scientific Advisers (CSA) network. Professor Iredale also thanked Dr Louise Wood, who was stepping down from Council, for her long and valuable service to MRC and for fostering a close partnership between MRC and the Department of Health and Social Care/the National Institute for Health Research.

2. Register of declared interests

Professor Iredale asked members to send any updated declarations to the secretariat.

The following conflicts had been identified for Item 8 - Health Data Research UK (HDR UK) quinquennial review (QQR) outcome: Dr Graham Spittle, Professor Jill Pell, Professor Sir

Munir Pirmohamed. The conflicted members did not receive the paperwork related to HDR UK QQR and were asked to leave the room for that item.

3. Minutes of the Council business meeting held on 5 October 2022

The minutes of the Council business meeting held on 5 October 2022 were approved as an accurate record of the meetings.

4. Outcomes and actions of the joint meeting with NERC

Members noted engaging discussion with their NERC counterparts the day before, and briefly revisited the main points articulated during the breakout conversations, in order to agree which areas of shared interest with NERC would have most potential to add value.

Discussing Planetary Health, members noted that the biggest signal associated with the climate change would be arising outside of the UK. Therefore, research focused on understanding environmental risks to health and on modelling the impact on health system needs would have broad benefits from the global health perspective. The UK-oriented research would be more appropriate to concentrate on the impacts of mitigating actions, rather than on adaptations.

Making the patient the focal point of research would be one way of coalescing different research approaches. As with the other two themes, there was a recognition of the potential value of existing MRC investments as a source of the relevant data. However, an audit of the potential datasets would be required to fully understand what might be available.

There was an agreement that focusing on prevention and population health would provide the two councils a common ground for collaboration. Exploring health and economic outcomes of mitigating actions would also provide the much-needed evidence to inform political discussions and decisions.

Addressing questions related to potential interventions and their value would require longer-term research.

Opportunities within the Pollution theme included exploration of links between pollutants and specific human health outcomes. Pollution-focused work could include the impacts of 'forever chemicals'¹ and pollutants with insufficient evidence, for example microplastics, as well as work on pollutant mixtures.

Other avenues of research could include identification of new technologies or applications that could help tackle persistent problems - for instance, the use of deep proteomics. Potential breakthroughs could be facilitated by linking different environmental, administrative and other types of data with health outcomes.

Modelling the impact of pollutants on different populations, for example underpinned by the varied genetic susceptibility; better integration with other research themes and frameworks, such as climate change; and building networks and partnerships would advance research on pollution.

Net Zero discussion identified gaps in our understanding of the health consequences of the net zero world and what the future homes and cities (urban environment) would look like as

¹ Human-made substances that do not breakdown in the environment

various mitigating measures start to be implemented. Specific questions related to the effects of heat/cold on productivity, health, new methodology of food production, nutrition, etc., as well as understanding potential health inequalities, varied impacts on different communities, and the potential mental health burden, particularly in children, would be among the topics to be explored by the two councils.

Members expressed particular interest in further exploring the possibility to pursue jointly with NERC the following topics:

- Understanding health and environmental risk factors and risk mitigations through public health and prevention research
- Understanding what future urban spaces/homes would look like and what health challenges this would pose
- Impacts of 'forever chemicals', volatiles and mixed pollutants (where the classical pharmacology does not work)
- Inequalities related to mitigating measures
- Sustainable food and alternative sources, their implications for diet and behavioural changes (members noted that this would also offer the opportunity to join forces with ESRC and to form broader collaboration within UKRI).

Council emphasised that opportunities around data were cross-cutting and that MRC should fully leverage its existing investments in HDR UK and other infrastructure, which would be key to explore links between exposome, genetic predispositions and health outcomes. Members noted that data from commercial sector, for example food industry, could bring a lot of value. MRC Data Science Strategic Advisory Group would need to be involved in conversations.

Members commented that, more broadly, UKRI councils ought to make their major research infrastructure – such as NERC Arctic Research Station, MRC units in Africa - available to each other, and that these assets have a lot to offer, particularly, for the global research agenda.

Opportunities to engage with other government departments and agencies, including the Department for Environment Food and Rural Affairs (DEFRA), Food Standards Agency (FSA) and Chief Scientist Office (CSO), to deliver such multidisciplinary research were discussed.

In conclusion, Council agreed that the MRC and NERC offices should now narrow down the list of topics and agree on the practical steps to take the joint agenda forward.

5. Finance report

The MRC Finance Director, Mr Gavin Mapstone, provided Council with an update on the MRC finances and the medium-term outlook, including plans for science commitment budget 2023/24. Members were presented with an overview of the 2022/23 allocations and MRC in-year position. It was noted that the existing underspends would be resolved by the end of the financial year. Members were informed that allocations had fallen since 2021/22, largely due to reduced Covid research funding and capital funding for institutes, and that while core research funding would be increasing over the remainder of the spending review (SR) period, non-core funding would reduce. Council was informed that many allocations in that category remained to be made. Mr Mapstone explained that since the majority of MRC institutes had either recently completed their quinquennial reviews, or were in the final stages of doing so, there was reasonable certainty of the costs MRC would incur for these investments over the next five years. It was expected that moving to the new model of Centres of Research Excellence (CoRE) to replace MRC units would reduce the associated costs in the long-term,

but that some additional funding might be required to support dispersal of internationally competitive research from the units as this moved to alternative mechanisms of support over the coming 5 years. It was unknown which of the current units would be successful, what the demand and quality of new applications would be, or what pressures would arise due to transition and supporting displaced activity. Therefore, there was considerable uncertainty around the financial implications of the transition of units to CoREs. Current MRC forecasts predicted that before reducing, costs would peak in 2026/27. Council would have some strategic choices to make on how to deploy the headroom created in the late 2020's.

Council discussed the medium-term outlook (including plans for science commitment budget 2023/24 and beyond), assumptions of the MRC financial modelling and the impacts of the transition from the unit model to CoREs. Members were informed that since UKRI was formed, there had been an increase in most activities funded through the commitment budgets, as MRC benefited from increased funding allocations. This would continue into 2023/24 because allocations would continue to increase, and headroom created through unit closures may start to be utilised. From 2024/25, commitments were expected to stabilise in line with the planning assumption that allocations become flat in the next SR.

Members raised concerns that the ambition of the last SR was being eroded by the high rate of inflation, and that increased costs of supporting research infrastructure might affect the delivery of research programmes and alter the balance of funding streams within MRC portfolio. It was noted that with inflationary increases in expenditure for institutes and units, the current year might be the high-point in the current cycle. Members were also concerned that as average funding of individual CoREs would be smaller than that of existing units, MRC might start facing an increased demand for response mode grants.

It was explained that the current modelling used by the office allowed to make flexible decisions downstream to mitigate against these uncertainties adapting to the demand and strategic needs. For example, MRC could explore re-profiling its capital allocations within UKRI budget, bringing forward spending in MRC co-funded programmes and initiatives, to flatten the surplus/deficits over the next few years and support response-mode commitment budgets as needed. This could help MRC to create sufficient capacity to respond to additional pressures arising in future. It was agreed that Head Office would present some scenarios to Council in 2023.

Members expressed their concern that potentially flat allocation in the next SR would mean a decrease in funding in real terms. The damaging effect of such scenario on the UK science and its international competitiveness could lead to the knock-on effect resulting in the loss of talent to other countries, making investment in the UK research infrastructure less impactful. Council recommended that MRC should work with other UKRI Councils to jointly demonstrate that they have efficient mechanisms to deliver the Government's vision of the UK as a scientific superpower. Members also highlighted that it was important to show to the academic community that MRC is aware of the current pressures in the sector.

6. Operational pressures

Dr Jonathan Pearce, MRC Director for Strategy and Planning, presented an item focused on the operational pressures, noting that challenges faced by the MRC Head Office were compounded by the rapid staff turnover, uncertainties arising from the UKRI operating model reform, including the requirement to reduce UKRI operating expenses, and a high degree of anxiety and stress of the MRC personnel. Dr Pearce informed Council that the staff attrition was particularly large in band E (Programme Manager cadre) but bands B, C and D, which are the powerhouse of operationalising MRC activities, were also negatively affected. This was happening at the time UKRI was implementing a new funding system. Members were told about the current exercise of mapping projects, activities and workloads across the office to inform robust forward planning and prioritisation. It was noted that while pressures were

shared across individual teams, their extent varied depending on a range of internal and external drivers.

Council was informed that UKRI was also undertaking work to explore how it could be more efficient as organisation. Council noted that the Head Office was having a rational, data-driven approach and appraised the situation through a strategic lens, being cognisant of both short-term impacts on the funding delivery and the long-term implications (for instance, on the MRC ability to lead on policy development and public engagement). MRC was concerned how to improve staff retention, given that MRC personnel is very recruitable, and other organisations often could offer higher salaries. It was noted that while currently there was no hiring freeze as such, MRC needed to maintain a headcount cap.

Members agreed that despite the pressures, it was important, from the reputational point of view, to maintain the appropriate quality of work done by MRC, and that on occasions when performance management was needed, Human Resources should provide the necessary support to the managers.

Council discussed the benefits and challenges of the hybrid way of working. Members appreciated the flexibility afforded by the new model and that it was very much valued by the staff but noted that opportunities to bring people in the office to maintain in-person interactions also needed to be explored.

Members agreed that the ongoing operational pressures were concerning and that the UKRI leadership should be made aware of the challenges faced by the office.

7. UK Dementia Research Institute quinquennial review

Dr Nathan Richardson, MRC Associate Director for Research Programmes presented Council with the outcome of the QQR of the UK Dementia Research Institute (UK DRI), which was established in 2017 and jointly funded by MRC, Alzheimer's Research UK and Alzheimer's Society. The Institute operates across seven Centres based in six universities.

MRC Council strongly supported the very positive review of the UK DRI (scoring 9, out of 10, for past and future plans) and commended the Director and the whole of the UK DRI for their excellent achievements to date. Council fully endorsed the views of Strategy Board and thanked Professor Bart de Strooper for all his hard work in establishing the UK DRI and wished him well in his continued scientific endeavours now that he was stepping down as Director.

Council noted that the UK DRI had succeeded in bringing new researchers into dementia research, outputs had been excellent and relationships between and across the Centres were good and still developing at this relatively early stage in the Institute's existence.

Council reinforced the need for the Institute to continue to strengthen internal join-up, co-operation and collaboration to tackle the biggest challenges in the field to further enhance its impact and added value from its component parts. It was also important to outreach and develop stronger external partnerships to both capitalise on complementary interests, skills and assets, and leverage opportunities for inward investment, including from industry and venture capital sectors which had increasing interest in neurodegeneration. Strengthening existing and building new collaborations with other stakeholders would offer important opportunities to enhance the Institute's translational agenda (for example, through the developing Life Science Vision Neurodegeneration Initiative which would have a strong experimental medicine and biomarker focus).

Attention turned to budget matters and members welcomed UK DRI's positive response to the review panel's recommendations of £30 million per annum for the next quinquennium (April 2023 – March 2028) which approximates to level funding, albeit with MRC to burden a greater share. Council concurred with the views of Strategy Board and agreed that this was fair, well-justified and offered excellent opportunities to achieve real impact. The UK DRI's case for an

additional £2m per annum was not made and the data-science programme should be managed from within the £30m per annum core budget. MRC's contribution of £26.2m over the next quinquennium was approved, complemented by £2.5m per annum from Alzheimer's Research UK and £1.3m per annum from Alzheimer's Society.

Members thanked Dr Jo Latimer, Dr Nathan Richardson, and the office team for all their hard efforts in bringing this review to a successful conclusion.

8. Health Data Research UK quinquennial review

The outcome of the QQR of another MRC partnership institute, HDR UK, was presented to Council. Due to their conflicts of interest, Dr Graham Spittle, Professor Jill Pell and Professor Sir Munir Pirmohamed left the room for this item.

HDR UK is a widely distributed, virtual institute, convening 86 organisations across the four UK nations, with core research and infrastructure delivered by eight collaborative academic "substantive sites". It was established in 2018 with a quinquennial core award of £52.75m, formed of contributions from nine core funders, with MRC the major funder committing £36.5m of this. MRC led the QQR process on behalf of the funders.

Council welcomed the strong commendations from the QQR Board and the excellent achievements HDR UK had made since its establishment in 2018, agreeing that the Institute had been an outstanding success story. The Institute overall scored 9 (out of 10) for both past achievements and future plans. Council commended the very strong leadership that had positioned the Institute as a highly influential part of the UK health data science ecosystem. HDR UK had demonstrated impressive convening power and trust to bring stakeholders together from across the sectors (academic, clinical, policy, industry) and the public to work productively together against the key challenges in bringing health and other data together for research. HDR UK was recognised as an international exemplar in enabling biomedical and health data science research at scale, with tools and approaches being adopted by other countries. Council agreed that HDR UK was in an excellent position to continue to make distinctive and influential contributions to the quickly moving and complex health data ecosystem. It was important that HDR UK continued to drive inclusive, collaborative approaches to ensure it can fully achieve its goals and deliver maximum impact, recognising the critical importance of working in partnership with the community and stakeholders in this space.

Council fully supported the views and recommendations from the QQR Board and Strategy Board and endorsed MRC's [in principle] commitment of £50.6m as part of a wider co-funding package. Council recognised the challenges in meeting the full funding ambitions of HDR UK, as recommended by the QQR Board, and agreed that MRC should continue to do all it can to secure a co-funding package as close as possible to the £78m request for the next quinquennium (April 2023 – March 2028). Council expressed disappointment that Wellcome was not willing to continue co-funding but welcomed the new partnership with CRUK and the positive engagement with UKRI, noting that UKRI was increasingly seen as taking a strong UK leadership position in data science. Council fully endorsed and commended the case to pursue further UKRI funding.

Members thanked the office for concluding this quinquennial review.

9. Regional meetings of Council: format of engagement

Following the re-start of the regional meetings of Council after the pandemic break, members reflected on the meeting held in Birmingham, hosted by the Midlands Innovation Health network in October 2022. Council noted the outputs of the meeting, introduced by Dr

Ivan Pavlov, MRC Programme Manager for Policy Ethics and Governance, and considered the format of future regional meetings of Council.

Members were pleased that the meeting in the Midlands allowed MRC to engage with multiple universities, with which Council did not engage before. This was different from the previous regional visits that were more focused on the host research organisation or MRC investment. It was noted that the ability to reach out to multiple stakeholders added value to the meeting. The showcase presentations, which covered a broad range of topics, were insightful and provided a good demonstration of regional strengths, helping to identify areas of potential growth. It was suggested that in future it would be good to ensure representation of local clinical academic and medical communities. Members also noted a good discussion at the session dedicated to research culture and support of diverse careers in research.

Members recognised that it might be difficult to ensure the availability of all senior representatives throughout the entire meeting but highlighted this would be instrumental for a productive dialogue. Council noted that in order to fully realise the benefits of these events, conversations should focus on articulating the specific needs of the region and potential solutions. These should be framed in the context of the broader role that MRC could play in the regional research and innovation ecosystem, rather than concentrating solely on the level of investment. Asking host organisations to articulate a case, which would justify having a meeting with MRC Council might facilitate a more focused discussion helping generate tangible outcomes. Longer planning time in advance of a regional meeting might be required to prepare for these conversations.

In conclusion, members expressed their strong support for continuing to hold regional meetings and leveraging MRC's relationships with local networks to broaden the outreach of Council's engagement with multiple research organisations and local stakeholders. Members suggested holding the next regional meeting in Scotland. It was also proposed that the office might wish to involve individual members of Council in shaping the agenda of these meetings and preparing strategic conversations with the senior regional leaders.

10. Annual report on monitoring of science operations and outputs

Dr Ian Viney, MRC Director of Strategic Evaluation and Impact, presented Council with the annual report on monitoring of science operations and outputs. The report provides assurance to Council that MRC has a robust monitoring process and demonstrated that across a range of indicators the MRC portfolio continued to be thematically diverse, clinically relevant and was delivering high quality output. Members were informed of the 2021/22 application numbers and award rates, including rates by gender and ethnicity, peer review response rates, expenditure distribution and research outputs. Dr Viney informed Council that the demand for grants returned to the pre-pandemic levels and the demand for fellowships continued to rise, while the quality (measured as the proportion of fundable applications) had been maintained. Council was pleased to learn that female-led grant applications had slightly higher award rate at the research boards for first time in five years. However, applicants from ethnic minorities continued to have lower award rates.

Reviewer response rates continued the negative trend of last years and had fallen below 30 per cent. Reviewers that had no previous relationship with the MRC displayed the lowest response. This was a concern as MRC substantially relied on this pool of external experts. Ways to improve the peer review response rate were discussed, recognising that it should be a multi-faceted approach, including ways to incentivise and recognise the contribution of peer reviewers, engagement with MRC-funded research community, and encouraging MRC institutes, units and centres to participate more fully.

Presenting changes in the MRC portfolio, Dr Viney noted that due to a number of Covid-related funding opportunities in the last few years, the proportion of grants relevant to infections research increased in the reporting period. Overall, the portfolio continued to become more translational, which was considered as a positive outcome. A marked increase in citation impact, driven by Covid-relevant publications in 2021 was noted. There was a strong contribution of MRC-funded research relevant to genomics and dementia in the UK publication output and a reduced contribution from cancer-related research.

Discussing the figures, Council was concerned by the lower rate of awards to applicants from ethnic minorities. Members noted the analysis included in the paper that separated out MRC investments in global health and showed that this portfolio made a large contribution to the applications from researchers from ethnic minority backgrounds. Members agreed that it would be helpful to separate out Official Development Assistance (ODA) and non-ODA awards in the analysis. It was also noted that Wellcome presented data for researchers affiliated with UK-based and overseas institutions separately. Members were informed that the award rates reporting would be harmonised across UKRI, and conversations were ongoing about other types of data collection and analyses, including opportunities presented by the new funding system.

Council suggested that it would be beneficial to be able to compare the numbers and trends across different funders, including NIHR, to make it more amenable to comparison and to enable sector-wide analysis. Members suggested that UKRI and MRC should consider this when developing their analysis methodology, as such data were very important for the research community.

11. REF 2021 case studies analysis

Dr Buddhini Samarasinghe (MRC Lead for Research Impact) and Dr Katherine Pitrolino (MRC Research Impact officer) provided Council with an overview of the Research Excellence Framework (REF) 2021 impact case studies (ICS) analysis undertaken by the MRC Evaluation and Analysis team. The analysis considered over 6000 studies submitted by 157 Higher Education Institutions for REF 2021, and identified 569 studies that were associated with MRC funding in research, training or infrastructure. Those were further analysed and 60 exemplar case studies chosen for the report.

The REF 2021 ICS analysis demonstrated a strong association of MRC-funded work with high-quality research - in Main Panel A nearly half of the MRC ICSs achieved the highest 4* score, associating world-leading quality with MRC. The analysis also revealed a high proportion of cross-disciplinary impact, and a diverse range of disease areas and topics covered by case studies submitted in 85 institutions distributed across the UK.

Concentrations of research impact were found in Edinburgh, London, Oxford, Cambridge and Bristol. MRC impact case studies were undertaken by diverse networks with a global reach of research collaborations. The main clusters of collaboration were located in Greater South-East, Edinburgh, Newcastle and Cardiff.

Members were pleased to note the creation of the MRC Impact Narrative Database that spanned across MRC's portfolio and contained over 4,000 records, which would allow the team to easily track the evolution of research impact and craft impact narratives to showcase when and where MRC funding made a difference. It was anticipated that the database would also be a helpful tool to support strategic decision making when investing into specific topics, areas, or locations.

Council thanked the Evaluation and Analysis team for their impressive work. Members stressed the importance of making the evidence of the role of biomedical discovery research in developing positive health and societal impacts easily accessible through public interfaces. Members asked the office to explore channels, such as social media, handouts, booklets, via which this could be done, and noted that the support of the communications team would be required. The office took an action to discuss this with Science Media Centre. MRC was working with the Science Media Centre on other projects.

Council discussed that in addition to case studies of excellent research, examples should showcase the impacts of MRC investments into research infrastructure and broader support of the biomedical research system, for example, through investing in talent and supporting research culture.

Council asked that the UKRI and MRC communication strategy be discussed at one of the meetings in 2023.

12. Equality, diversity and inclusion (EDI) considerations in decision making

Council reviewed the decisions made during the meeting for EDI considerations, noting that those were implicit for the operational pressures item (item 6), and that some further analysis of the data presented in the monitoring of science operations and outputs report (item 10) would be helpful to better understand the demographic and geographical distribution of MRC awards.

13. Environmental sustainability considerations

Dr Susan Simon, MRC Director for Capital and Estates, informed Council that while the MRC's target to achieve zero tonnes of carbon dioxide equivalent (tCO₂e) for its institutions was set as 2040, the commitment to half it by 2030 was more challenging. The feasibility studies of MRC facilities would be available in March and would feed into the wider UKRI Environmental Sustainability Programme. Dr Simon noted that the delivery was becoming progressively more difficult, with challenges being related to insufficient funding to undertake all works required for the economic environment, limitations of the procurement processes, and the fact that technological solutions and national infrastructure were not mature enough.

Members were informed that the UKRI Environmental Sustainability Programme, with Professor Duncan Wingham as Senior Responsible Owner, was progressing with four workstreams: two focusing on the enabling activities (policy work, and the data & carbon tracker), and two on the delivery (estates & research infrastructure transformation, and the development of a Concordat for the UK R&I sector).

Members were pleased to note that MRC managed to recruit a new Environmental Sustainability Programme Director, Andrew Waggott, who would start in January 2023.

Members thanked Dr Simon for leading this strand of work and commented that it would be good to be able to compare how UKRI/MRC activities sat alongside of what was being done by other countries.

14. Any other business

Council received an update that the QQRs of the MRC Integrative Epidemiology Unit and Uganda Unit had been completed with the recommendation to award level funding for the next quinquennium in both cases. No other business was raised.

15. Council private business

Following the meeting members held a private business meeting.

Items for Information

Council noted the following papers for information:

16. Updates from the Executive

17. Quarterly Operations Updates: dashboards