This briefing explains the application of Deliberative Mapping – a process designed to involve specialists and citizens in decision making – to the problem of kidney shortages, and summarises how participants appraised the various options for the way forward.
The first application of Deliberative Mapping was to the problem of the kidney gap. Thirty-four citizens from north London were recruited to take part. Individuals came from a wide range of ages, occupations, ethnic backgrounds and family circumstances. They were split by gender and socio-economic background into four citizens’ panels: C2D women, C2D men, BC1 women, BC1 men. Seventeen specialists also took part from a number of relevant disciplines and organisations (see Figure 1).

Deliberative Mapping is a methodology which can be applied to a problem to judge how well different courses of action perform when appraised against a set of economic, social, ethical and scientific criteria. Fundamental to this approach is the involvement both of specialists and members of the public (see Briefing 2 in this series for more information).

Options for addressing the kidney gap

The task for citizens and specialists was to learn more about a series of potential options for addressing the kidney gap, and to compare their performance against a range of criteria. Participants appraised up to ten different options: six ‘core options’ and four ‘prompted options’ (see Figure 2). Individuals could elect not to appraise the prompted options if they wished; they could also introduce new options.
The citizens and specialists followed different but overlapping processes (see Figure 3).

The four citizens’ panels met for six evening meetings, with a joint workshop with specialists (or ‘specialist fair’) between meetings 4 and 5. As part of this participants worked jointly through a paper-based multi-criteria mapping (MCM) process (see Briefing 5 in this series for more information).

Specialists took part in a scoping interview at the beginning of the process and two software-based MCM interviews, split by the joint workshop. They also attended a specialist workshop at the end of the process to reflect on the findings and approach.
The participants scored the options against appraisal criteria that they defined.

The criteria fell into 11 broad categories (see Figure 4). Individuals weighted the criteria in each category to establish the relative importance they attached to each. Analysis of this revealed that there were many areas of agreement among citizens and specialists, as well as some differences in terms of interpretation and priority.

Despite many differences in perspective, there was a remarkable degree of consistency between the appraisals made by the citizens and specialists.

Of the six core options, two performed markedly better than the others: ‘improved transplant services’ and ‘encouraging healthier living’.

Two further options generally ranked highly, but slightly lower or with more qualifications than the two preferred options: ‘presumed consent’ and ‘altruistic living donation’.

The two technology-based options – xenotransplantation and embryonic stem cells – performed markedly worse than the others.

The picture for the four discretionary options was, for various reasons, more ambiguous.

Figures 5-7 illustrate the group patterns lying behind this overall picture. They show the extent of the convergence between the citizens’ panels and the various groupings of specialists, as well as areas of difference.
Deliberative Mapping

CITIZENS AND SPECIALISTS INFORMING DECISIONS ON SCIENCE AND TECHNOLOGY

KEY TO OPTIONS (for figures 5-7)
1  improve transplant services
2  altruistic living donation
3  presumed consent
4  xenotransplantation
5  embryonic stem cells
6  encouraging healthier living
7  improved kidney machines
8  adult stem cells
9  rewarded giving
10 accepting death

Figure 5: Citizens' panel rankings

Figure 6: Specialist's rankings

Mean ranges for 17 participants

Ranges show combination of individual uncertainties and variability across individuals.

- option appraised by all participants
- option appraised by all participants and ruled out by some
- option not appraised by all participants
KEY TO OPTIONS (for figures 5-7)

1. improve transplant services
2. altruistic living donation
3. presumed consent
4. xenotransplantation
5. embryonic stem cells
6. encouraging healthier living
7. improved kidney machines
8. adult stem cells
9. rewarded giving
10. accepting death

Figure 7: Mean ranking ranges for sub-groups of specialists

Three Industry Specialists

Two Medical Research Specialists

Three Transplant Policy Specialists

Three Healthcare Policy Specialists

KEY

All the charts above and right show means of performance ranges, from low on the left to high on the right. Ranges show combination of individual uncertainties and variability across individuals.

- ■ option appraised by all participants
- □ option appraised by all participants and ruled out by some
- □ option not appraised by all participants
The citizens had mixed opinions about the likely impact of the Deliberative Mapping project on policy. The BC1 panels, especially the men, were more optimistic that policy makers would take note of the findings than either of the C2D panels. Specialists welcomed the project and thought it offered a worthwhile public engagement strategy for policy makers. Some were worried about how the richness of discussions could be communicated successfully to decision makers. More generally, there were concerns about how to scale up from the local to the national level.

Applying Deliberative Mapping to the kidney gap demonstrated that quantitative and qualitative appraisal techniques, and individual and group-based methods, can work together effectively as part of a deliberative and inclusive process. There

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**Figure 7: Mean ranking ranges for sub-groups of specialists continued**

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**Evaluating the Deliberative Mapping process**

The citizens expressed a sense of empowerment and strong feelings of ownership over the results of the Deliberative Mapping process. They valued having sufficient information to engage with the issues, working through a structured decision-making process and meeting specialists.

Specialists felt that their learning from the process was social rather than technical. They were all genuinely surprised by the quality of the citizens’ deliberations and their willingness to engage with, and challenge, specialist views. This was an important finding given the tensions that exist in policy circles about the ability of the public to participate in scientific and technical decision making.

**The impact of the process on policy making**

The citizens had mixed opinions about the likely impact of the Deliberative Mapping project on policy. The BC1 panels, especially the men, were more optimistic that policy makers would take note of the findings than either of the C2D panels.

Specialists welcomed the project and thought it offered a worthwhile public engagement strategy for policy makers. Some were worried about how the richness of discussions could be communicated successfully to decision makers. More generally, there were concerns about how to scale up from the local to the national level.

Applying Deliberative Mapping to the kidney gap demonstrated that quantitative and qualitative appraisal techniques, and individual and group-based methods, can work together effectively as part of a deliberative and inclusive process. There
may not be the same high degree of agreement every time the process is used, but the results will always provide a practical detailed picture of the relative performance of different options.

By balancing a variety of specialist and citizen perspectives, Deliberative Mapping may help to foster more productive discussions about policy, although there is no guarantee that the outcomes will be fed successfully into a policy-making process.

About the Deliberative Mapping briefing paper series
This is one of five briefings which explain Deliberative Mapping. This is an approach designed to help specialists and members of the public weigh up evidence to reach a joint decision on a complex policy issue where there is no obvious way forward.

The five briefing papers are:
1. Opportunities and challenges for involving citizens in decision making
2. The Deliberative Mapping approach
3. Deliberative Mapping in practice: the ‘kidney gap’
4. Citizens’ panels in Deliberative Mapping: a user guide
5. Using the Multi-Criteria Mapping (MCM) technique.

Further information
These briefings are available to download at www.deliberative-mapping.org

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Reference
1 Patients waiting for a kidney transplant and their carers were not recruited.