

Progress report, January 2011-August 2014

Purpose of and background to PIRU

In 2009 the Department of Health (DH) in England identified a need to improve its capability for the use of evidence for policy making, particularly in the initial stages of the process, and set about commissioning this from the research community. One response to this need developed by the DH's Policy Research Programme (PRP) was an invitation to tender for a new wide-ranging policy research unit (PRU) on policy innovation. The invitation to tender stated:

'This Unit is designed to improve the Department's capability for evidence based policy making (EBPM). Its role will be to strengthen the use of evidence in the initial stages of policy making.... It will do this in particular by supporting, or undertaking, the evaluation of policy pilots or demonstration initiatives. The Unit's core expertise will thus be methodological, rather than topic specific, of relevance to all aspects of the Department's policy activity.'

DH PRP Policy Research Units Research Brief: Stage 1, Annex 3, p13

The Policy Research Unit in Policy Innovation Research (PIRU) began work in January 2011, initially with five years of funding, now extended to the end of 2017.

Like the other PRUs, the Unit is required to retain a significant proportion of its resources for responsive work for the Department, enabling speedy access to senior expertise across a broad range of policy areas. Given that the Unit's focus is evaluation methods and related policy analysis in general, rather than a specific topic area, PIRU's work programme tends to be more strongly shaped by unplanned 'responsive' requests than the work programmes of many other PRUs.

How PIRU is organised

Consistent with its very broad remit, PIRU involves a large number of partner organisations and staff. Research, evaluations, policy analytical work and advice on evaluation are undertaken by a combination of senior and junior staff at the London School of Hygiene and Tropical Medicine (LSHTM), the Personal Social Services Research Unit (PSSRU) at the London School of Economics and Political Science (LSE), Imperial College Business School, RAND Europe and the Nuffield Trust (listed in Annexe 2). Some junior staff are recruited to work on specific projects; others form part of a 'core', working on a series of projects. Where additional expertise is required, PIRU obtains this from a group of 'preferred providers', via call-off sub-contracts, or via ad hoc sub-contracts with individuals or research groups.

The Unit's Management Team consists of Nicholas Mays – director and lead on health services (LSHTM), Mark Petticrew - lead on wider public health (LSHTM), Martin Knapp - lead on social care (PSSRU, LSE), Bob Erens - deputy director (LSHTM), James Barlow (Imperial College Business School) and Ellen Nolte (RAND Europe). Through his direction of the Public Health Research Consortium (PHRC) and his involvement in the NIHR National School of Public Health Research, Petticrew provides strong links to larger public health research programmes. Through his direction of PSSRU (at LSE) and the NIHR School for Social Care Research, Knapp offers similar links to a wide range of social care research and researchers, and to related policy communities.

This organisation of the Unit, with significant senior staff involvement, allows for speedy and efficient mobilisation of a broad range of evaluative skills and experience consistent with the remit of the Unit.

PIRU's aim and objectives

The successful bid for the Unit included an ambitious vision statement:

‘to ‘co-produce’ rigorous research evidence to inform the early stages of policy innovation through a joint enterprise between a team of researchers and a wide range of policy decision makers in the Department of Health (DH) and the NHS.’

Local government decision makers should have been added to this statement since a considerable part of the current work involves projects spanning the NHS and social care (e.g. the evaluation of integrated care and support Pioneers, and the evaluation of the direct payments in residential care Trailblazers).

PIRU brings together health services, public health, social care, international comparisons and innovation subject area research expertise to support and improve evidence-informed policy-making across NHS, social care and public health policy, principally at national level, though with consideration of the implications for local decision makers and patients/users. The disciplines involved include economics, statistics, sociology, psychology, political and policy science, public health medicine and social work.

The distinctive aim of PIRU is to attempt to (co-)produce rigorous research evidence to inform the early stages of policy development, particularly in relation to innovative pilots and demonstration programmes.

PIRU's related objectives set out in its first work programme were to:

1. Develop early awareness of emerging and new challenges facing the health and social care system in England with a view to providing advice on where pilots and innovation are most likely to be needed and beneficial in maintaining improvements in health and well-being.
2. Develop a way of working with the Department of Health based on close relationships so that PIRU staff members are fully integrated at an early stage into the processes leading to important policy innovations, and that Department staff are fully involved in the design of evaluations, so that innovations are evaluable and generate learning for policy development.
3. Advise on the design and methods of evaluation of policy innovations so that evaluations are robust and capture impacts on different population groups, across different parts of government, but are tailored to the realities of practical policy making.

4. Undertake evaluation of high priority policy pilots or demonstration programmes using formative and/or summative approaches and ensure that the findings are used for future policy development.
5. Increase and strengthen the ability of the Department to use evidence from previous research for future policy innovations.
6. Contribute to developing better methods for policy and programme evaluation.

The theory was that if these objectives were implemented effectively, the Unit should contribute to improving the quality, utility and value for money of evaluations across the Department of Health portfolio. In turn, this would improve the quality of policy decisions and policy results.

The purpose of this progress report is to assess how well PIRU has succeeded in meeting its early objectives and to identify the impacts of its work.

Overview of progress against aim and objectives

Unlike a number of the other DH PRUs that were re-tendered in 2009/10 and re-established in a different form starting in January 2011, PIRU had no precedent and no established ways of working with the Department. In particular, it has a much broader scope than the other Policy Research Units. As a result, the whole Department represented potential 'customers'. The Unit was hampered in identifying a standing 'customer group' among DH staff because the Department was going through a major restructuring and downsizing, in response to the changes associated with the 2012 Health and Social Care Act and cross-government austerity measures. For example, the original invitation to tender for the Unit in April 2009 had indicated that 'a mechanism will be established to embed the work of the Unit effectively within the 'strategic hub' of the Department'. Yet, the extent of change within the Department coupled with wider system change meant that this is still more an aspiration than reality, though recent changes and appointments show some shift in this direction. For example, a new research committee to identify strategic priorities for the Policy Research Programme across DH and the new arm's length bodies, which may assist PIRU in identifying the Department's strategic evaluation needs, was established in April 2013.

The majority of PIRU's projects to date – both its planned work programme and its responsive work – can be summarised under the four over-arching themes set out in the initial work programme of December 2010:

1. Horizon scanning and identification of evaluation priorities
2. Methods for evaluation of complex interventions - Strand 1: Evaluation of complex interventions; Strand 2: Improving evaluation methods; Strand 3: Scoping and early development of evaluations
3. Making better use of administrative data for policy/pilot evaluations
4. Improving commissioning, execution and use of policy/pilot evaluations

Each of PIRU's current and past projects is listed below in Annexe 1 under one of these four themes.

The amount of planned work carried out by the Unit has been somewhat lower than envisaged in the first work programme, while the level of responsive work has been higher, though the mix is still consistent with the mission and objectives of the Unit described above. In large part, this is due to the fact that the Unit does not have a defined topic focus) and because the Unit has been much in

demand. Thus its initial planned programme was largely methodological, but to be realised this required opportunities and needs to tackle these methodological problems in the context of 'real' projects. For example, staff in the Unit have a strong interest in improving methods for implementing quasi-experimental designs based on different approaches to matching and synthetic controls. So far, this work has been pursued through secondary analysis of previous studies rather than in new primary studies. There was an apparent opportunity to apply the latest thinking in this area to an evaluation of a series of pilots of elements of a new NHS community dental contract, but, in the event, the DH policy team decided on a different approach to learning from the pilots and the opportunity disappeared.

Similarly, the initial work programme, 2011-13 included work on data acquisition, data linkage between health and social care sectors and use of high quality clinical databases for policy evaluation, but this was dependent on having a clear need in this period to use such data in specific evaluations without which it is impossible to obtain datasets. As the Unit's projects evolved in a different direction in the period, this strand of work was not taken forward in the way expected (though a journal paper was produced highlighting the potential uses of clinical databases for policy evaluation).

Likewise, the planned streams of work on evaluation of 'complex' interventions, on evaluation of policies/programmes without comparison groups and on mechanisms of policies that risk increasing inequalities evolved somewhat differently from initial plans since they were largely dependent on having suitable programmes or policies to evaluate. In the event, these streams of work became almost exclusively focused on the evaluation of the Public Health Responsibility Deal. In particular, this evaluation has required the development of novel methods for evaluation without comparison or control groups.

However, the larger than expected proportion of work originating in responsive requests from DH has not led to a work programme dominated by small scale or short term projects. In fact, many of the projects that originated from requests for responsive work have turned into substantial and important projects (e.g. the evaluation of the Responsibility Deal (RD) began as a relatively brief, small-scale project to scope a potential substantive evaluation, following which the Department decided that the Unit should continue to undertake the full evaluation after preparing a detailed proposal for external peer review). A similar path was taken with the evaluation of the direct payments in residential care Trailblazers from early stage 'scoping' work to a further two years of evaluation.

On the other hand, the Unit has by no means shied away from short-term responsive work as Annexe 1 shows. Staff have been willing to advise on research priorities, advise on the design of evaluations and performance indicators, provide literature reviews and give presentations at very short notice.

Progress against specific objectives

This section reviews activities and progress in relation to the six objectives set out above.

- *Develop early awareness of emerging and new challenges facing the health and social care system in England with a view to providing advice on where pilots and innovation are most likely to be needed and beneficial in maintaining improvements in health and well-being.*

PIRU has undertaken a range of work focused on future challenges facing the health and social care system, and their related research priorities such as the project that developed a set of health care

system scenarios for the year 2030 to help NHS England with its strategic planning. The projects were a mix of responsive and planned, and are listed under Theme 1 in Annexe 1.

- *Develop a way of working with the Department of Health based on close relationships so that PIRU staff members are fully integrated at an early stage into the processes leading to important policy innovations, and that Department staff are fully involved in the design of evaluations, so that innovations are evaluable and generate learning for policy development.*

PIRU has been highly active and responsive in undertaking a mix of short and long term work on issues of central policy importance and related pilots (e.g. work on integrated care, trends in dementia policy and practice, wider public health policy affecting food and alcohol, etc.), but has made less progress in becoming routinely involved at an early stage of the policy innovation process despite working through the PRP to develop links with a wide range of DH officials. For instance, the initial work programme, 2011-13 included a proposal to develop a range of innovative ways of interacting with the Department and of embedding the use of research and evaluation more strongly in the way the Department operates (e.g. secondments and exchanges, 'Red Teaming', changes to policy processes, various forms of capacity building, etc.). Unfortunately, the timing could not have been worse. The Unit began its life when the Department was undergoing structural reorganisation, downsizing and a budget cut. As a result, the Unit's liaison officer made it clear that there was no possibility of making any progress on any of the ideas in the initial work programme in this area.

On the one occasion when the Unit was invited initially to offer its services to help develop and specify a pilot programme in detail and at an early stage, based on evidence and experience from previous initiatives (in relation to the integrated care and support Pioneers), the initial invitation was subsequently withdrawn and sources of expertise other than PIRU used. The rationale for this was not explained at the time, but it may have been the result of a concern to reserve PIRU's contribution to the 'independent' evaluation of the Pioneers. This arises not only from a perceived need to ensure probity in the procurement of major research evaluations, with researchers who have had any involvement in advising on the specification of an intervention excluded from bidding for its evaluation, but also the perspective that evaluation should always be 'independent' and that researchers with prior involvement in an initiative cannot credibly undertake its 'independent' evaluation. Taken at face value, this perspective would make it impossible for a Unit like PIRU to provide any advice in areas where it also undertakes evaluative research (this issue is returned to, below).

DH has an established way of working with its PRUs and other academic researchers which does not necessarily include early engagement in the design of policies and pilots, despite PIRU's ostensible remit. Engagement tends to come later when research is being formally commissioned on behalf of a policy 'customer' from an independent research provider (the 'contractor'). It does not seem likely that this will easily change, especially given the constraints of a time-scarce policy process and of competition policy as it affects research commissioning (e.g. concerns about conflicts of interest if researchers are involved both in specifying a pilot and bidding to evaluate it, even if they make all their data and materials available to all those subsequently tendering).

An alternative approach would be for DH to view the drawing up of a specification for an evaluation as the first phase of the research proper. Indeed, in practice, a number of invitations to tender now include a requirement to undertake some preliminary work before submitting more detailed proposals, particularly for outcome evaluations. This approach might circumvent some of the requirements relating to competitive procurement which can lead to long delays before research can begin.

- *Advise on the design and methods of evaluation of policy innovations so that evaluations are robust and capture impacts on different population groups, across different parts of government, but are tailored to the realities of practical policy making.*

PIRU has provided a range of advice on the overall design and specific methods for evaluations. This work is described under Theme 2, Strand 3 in Annexe 1. Thus PIRU staff have particularly provided advice on the evaluation of innovative programmes (e.g. the children's and young people's improving access to psychological therapies programme (Mays)). Consistent with the original work programme, 2011-13, this advice has included qualitative assessment of the potential value of new evaluations though the Unit has not had the time to take forward the plan to develop a new decision aid to help research commissioners balance the likely costs and benefits of conducting evaluations of innovations.

In two instances (evaluations of the drugs payment by results pilots, and prison drug recovery wing pilots), the Unit undertook rapid research at the early stage of pilot implementation in order to refine understanding of the nature of the novel interventions represented by the pilots and identify the main questions for their subsequent evaluations. In other cases, such as in relation to the New Medicines Service (Mays), and the Innovation, Health and Wealth (IHW) Strategy (Barlow, Bayer and Mays), PIRU went further to provide a draft invitation to tender which was eventually responded to by others. In the case of the IHW Strategy, PIRU did quite extensive work to identify the intervention logic underlying each of the main elements in the Strategy, to identify which of the actions in the Strategy were 'evaluable' and to prioritise the evaluable actions. This informed the preparation of an invitation to tender by PRP for the evaluation of the Strategy, which was issued in summer 2013.

As well as advice on the design of evaluations, PIRU has also advised on suitable indicators that can be used for more routine monitoring of performance in two contexts: the NHS Outcomes Framework; and the assessment of progress in relation to integrated care and support. In relation to the former, PIRU was asked to assist with the detailed definition of indicators on ambulatory care-sensitive unplanned hospitalisations, avoidable emergency admissions and avoidable emergency readmissions that were to be used from April 2012 in the NHS Outcomes Framework. This rapid work eventually led to a review of the causes of emergency admissions and how to define appropriate performance indicators of emergency admissions undertaken by the DH-funded on-call facility for international healthcare comparisons (led by Nolte). In relation to the latter, PIRU was asked to prepare a report within roughly three months identifying and justifying a set of indicators based on current routinely collected data that could be used to track the extent and impacts of health and social care service integration.

With colleagues at LSHTM outside PIRU, the Unit has undertaken a small amount of work on the refinement of methods for 'rapid reviews', as set out in the initial work programme, by contributing to a paper that identifies a range of types of reviews and their appropriate application, including rapid reviews. This so called Evidence Synthesis Framework is designed to help knowledge users, brokers, commissioners and producers decide which review output best meets an identified information need.

- *Undertake evaluation of high priority policy pilots or demonstration programmes using formative and/or summative approaches and ensure that the findings are used for future policy development.*

Undertaking independent evaluations was always likely to be a core PIRU activity, in particular, because this is the most familiar role for academic researchers, vis-à-vis DH. PIRU has completed and is currently undertaking a wide range of mostly mixed method evaluations of high priority policy pilots. These are summarised under Theme 2, Strand 1 and Theme 3 in Annexe 1. Three evaluations

have been completed: of the choice of GP practice pilot; the National Cold Weather Plan; and the *Healthy Outlook* telephone alert service for people with COPD. Four are in progress (of the Public Health Responsibility Deal, direct payments in residential care Trailblazers, social impact bond Trailblazers, and the early phase of the integrated health and care Pioneers). PIRU has worked to try to ensure that the findings are used for policy development, though this is largely outside the direct control of the Unit. For example, in the evaluation of the choice of GP practice pilot, an interim final report was prepared for NHS England several months ahead of schedule in summer 2013 so that the main findings would be available to be taken into account when decisions were taken on whether to roll out the pilot nationally. In addition, an analysis of the potential costs and benefits of the roll out of the pilot was submitted for publication in June 2014 in an effort to contribute to thinking ahead of its implementation in October 2014. Similarly, early findings from the evaluation of the National Cold Weather Plan were presented orally to DH and Public Health England staff in summer 2013, ahead of the final report so that they could be taken into account in the revision of the Plan ahead of winter 2013-14.

- *Increase and strengthen the ability of the Department to use evidence from previous research for future policy innovations.*

PIRU has principally implemented this objective by undertaking evidence syntheses at an early stage of evaluations of pilots (e.g. two literature reviews of domestic and international evidence to inform the evaluation of the choice of GP practice pilot). A scoping review was undertaken as part of the work to specify a potential approach to the evaluation of the Public Health Responsibility Deal. The review was particularly useful in developing a 'logic model' of the Deal, which, in turn, informed the focus and methods for the main evaluation.

However, other evidence syntheses have been undertaken, often at short notice with very short deadlines, to contribute to specific policy development processes (e.g. a number of rapid evidence syntheses to support the development of the 2012 social care White Paper and a paper summarising the evidence on loneliness and health in later life). The largest evidence synthesis for this purpose, on alternatives to the use of anti-psychotics in the management of people with dementia exhibiting challenging behaviour, was designed to feed directly into the development of DH policy and practitioner advice on how to reduce dependence on use of anti-psychotics in this group of people (see Other Projects in Annexe 1).

- *Contribute to developing better methods for policy and programme evaluation.*

The Unit has undertaken a number of primarily methodological projects to fulfil this objective, particularly focused on the challenge posed by selection bias which potentially affects all quasi-experimental evaluations. PIRU chose to focus on quasi-experimental designs (e.g. difference-in-difference) since these are most commonly encountered in the evaluation of policy innovations and pilots. This work is summarised under Theme 2, Strand 2 in Annexe 1. Reanalysis of data from previous quasi-experimental evaluations (e.g. from the *Advancing Quality* hospital payment-for-performance programme in North West region) shows that methods for selecting control groups can change results sufficiently to alter their policy implications. Other work has identified the potential for greater use to be made of the programme of national clinical audits in England and other clinical databases that are typically under-used in policy evaluation research.

As well as work on research methods for policy evaluation, PIRU has also looked more widely at the specification, design, execution and use of findings from evaluations of a number of high profile pilot and demonstration programmes commissioned by DH in recent years with a view to providing guidance for researchers, policy officials and the Policy Research Programme (see Theme 4). Findings suggest that policy pilots are initiated for a variety of different reasons, of which formal

evaluation is only one. The different reasons can, and often do, come into conflict with one another, and this has implications for the role of evaluation in policy.

Dissemination activities

The Unit has increased its dissemination and engagement activities as its research programme has gained momentum. The output list (Annexe 3) shows the large number of face to face presentations given by Unit staff, in particular, regular lunchtime seminars at the Department of Health, largely but not exclusively aimed at analysts. The Unit's website carries a blog series as well as slide presentations, pod cast interviews and the usual range of project summaries, reports and links to journal articles.

In February 2012, we organised a conference over one and a half days on payment for performance (P4P) in public services with particular reference to health care. This involved presentations by PIRU staff along with external speakers. PIRU's website includes slides from staff seminars and video recordings from the P4P event (<http://www.piru.ac.uk/events/payment-for-performance.html>).

In February 2013, the Unit participated with other DH policy research units in a showcase event on social care research organised for policy staff and analysts in the Department by the NIHR School for Social Care Research. This has become an annual event with the 2014 showcase scheduled for 7 October.

A day meeting on challenges in policy evaluation took place on 4 July 2014, held in association with the Public Health Research Consortium and the NIHR National School for Public Health Research. The slides and a short report of the main themes will be posted in November 2014 on the PIRU website.

We have also regularly met with policy teams at an early stage in each evaluation to help us shape our evaluation questions, and refine our methods, and at an appropriate point to present emerging findings informally. This occurs alongside traditional academic dissemination via the relevant HSR/Health Policy/Public Health journals and conferences. In the case of the RD evaluation we have also presented the evaluation at RD stakeholders' events which include academic, policy, and industry representatives. We also met individually with the chairs of all the individual networks (alcohol, food, physical activity, health at work) in 2013 to discuss the evaluation before it began. Again this involved meetings with various academics, policy and industry representatives depending on the network.

PIRU researchers have discussed their findings in the mass media (e.g. Nicholas Mays was interviewed extensively on local and national commercial and BBC radio concerning the findings and implications of the evaluation of the choice of GP practice pilot in spring 2014).

A list of PIRU's outputs is at Annexe 3.

Impact of PIRU work

It is notoriously difficult to identify the impacts of specific pieces of research-related advice and individual research projects without undertaking detailed investigation. Even where research insights are visibly taken notice of, it is difficult to determine how decisions and their consequences would have been different in the absence of the research. For example, findings have simply confirmed an already chosen policy path which, though valuable, is challenging to demonstrate. In some cases, PIRU has attempted to find out whether a piece of work has proved useful, but, apart from general, informal feed back to the effect that the Unit's work is valued, it has not been possible

to obtain much insight into this. As a result, this section can only attempt to offer some examples of the impacts of PIRU's work that are apparent to the researchers, as follows:

1. Part of the programme of work evaluating the National Cold Weather Plan (CWP) showed that the current temperature thresholds that trigger a cold weather alert through the NHS and mass media are set too low given the pattern of relationship between low temperature and morbidity in the UK if their purpose is to advise people how to minimise the health harms of low temperature. Public Health England (PHE) decided to review the thresholds in the CWP ahead of winter 2014/15 as a direct result of PIRU's analysis. PHE now puts greater emphasis on alerting the health and care system, and the public to the need to prepare for winter conditions in general rather than extreme cold, ice and snow.
2. The evaluation of the choice of GP practice pilot showed that the option of visiting an 'out of area' practice as a day patient was less popular than the alternative of 'out-of-area' registration and overlapped substantially and unhelpfully with existing ways of seeing 'out-of-area' patients as 'temporary resident' status and the ability for patients requiring 'immediate and necessary' treatment to receive it. The roll-out of the pilot nationally, planned for 2015, does not include the day patient option, in line with the findings of the PIRU pilot evaluation. It is likely that PIRU's work contributed to this decision. Subsequently, the evaluation findings and data have been used in drafting the guidance from NHSE on the roll out of the scheme and the likely scale and nature of demand for out-of-area registration with general practices.
3. A number of the 'early' investigations into pilots undertaken by the Unit (e.g. on direct payments in residential care and prison drug recovery wings) have prevented the commissioning of weakly specified evaluations at high cost, but enabled better informed and higher value for money invitations to tender and ensuing proposals. Similarly, PIRU advised on the feasibility and potential value of conducting evaluation of the actions set out in the Innovation, Health and Wealth Strategy. As a result, only a minority of aspects of the Strategy were included in an invitation to tender, avoiding wasting resources on trying to commission and/or undertake potentially fruitless evaluations.
4. The report on indicators of progress in integrated care and support prepared primarily for the integrated care Pioneer programme has attracted overseas interest from the Catalan ministry of health leading to an invitation to present the main conclusions to a workshop in Barcelona. Similarly, initial highly responsive advice from PIRU on candidate indicators for the NHS Outcomes Framework led to a review of the scope to develop indicators relating to emergency hospital admissions (by the On-call Facility for International Healthcare Comparisons at RAND Europe), the conclusions of which have been taken up in the revised NHS Outcomes Framework.
5. PIRU's joint report with the NIHR School for Social Care Research (SSCR), '*Independent assessment of improvements in dementia care and support since 2009*' has gone to the Secretary of State, Jeremy Hunt, and Minister, Norman Lamb, and is being used by the DH to feed into planning for the so called 'Dementia Ambition'. This is the policy framework that will succeed the National Dementia Strategy 2009-14.
6. The review on social care research underway and planned, also undertaken with the NIHR SSCR, although rather different in nature from most PIRU activities, has proved to be very useful to the DH and to many other people. The DH has asked for this to become an annual activity. While it may be more appropriate for this to be led by the NIHR SSCR, PIRU has a useful contribution to make and the exercise is a way of building relationships with policy makers in DH and other arm's length bodies.

7. In a controversial area of policy, PIRU's approach to the difficult challenge of how to evaluate the Public Health Responsibility Deal, while not satisfying the harshest critics of the policy, seems to have been generally positively received by academics, non-governmental organisations, politicians and businesses involved. We can expect more criticism from all sides when the findings begin to be released, but the evaluation approach has served to demonstrate that the Department is serious about having the RD independently evaluated.

ANNEXES

Annexe 1: PIRU projects by theme

Theme 1: Horizon scanning and identification of evaluation priorities

1.1 Potential research priorities arising from NHS reforms, 2010-12

As one of its early activities, PIRU undertook a horizon scanning exercise in the first half of 2011 in order to identify emerging trends and issues in England to inform its own planning and wider DH priorities for research. The project assessed the overall landscape, as well as debate around that landscape, reviewed existing and emergent policy issues, and synthesised available evidence on these issues, in order to identify gaps in knowledge. The evidence gaps suggest priority areas for new research to support effective policy implementation and evidence-based policy innovation.

Five policy areas were included in the analysis:

1. Improving health outcomes and quality of care in a context of cost constraints
2. Changes in patient expectations and attitudes
3. Self-management approaches and increased personal responsibility for health
4. Placing patients at the centre of services and increasing accountability to patients
5. Market-based approaches for generating competition, reducing costs and improving performance

The exercise identified a large number of areas where there was emerging policy interest, but where the current evidence suggested that new research may be merited. Some of these have subsequently been adopted within PIRU's work programme.

Output

A report made available on the PIRU website.

Barlow J, Hendy J. Potential research priorities arising from proposals for NHS reforms in England. PIRU Publication 2012-2. URL: (<http://www.piru.ac.uk/files/2012-2%20PIRU%20Publication.pdf>)

Research team

James Barlow (lead) and Jane Hendy (Imperial College)

1.2 Thematic summary of DH Policy Research Units' plans for future research on adult social care

During the latter part of 2012 and early 2013, the Department of Health was reviewing its priorities for research on adult social care. It commissioned PIRU, in this context, to prepare a short thematic summary of the research plans of the relevant Policy Research Units (PRUs) on this topic, working in partnership with the NIHR SSCR. The summary was to cover the current social care research activities and plans of QORU, SCWRU, ESHCRU, EEPRU and PIRU, as well as NIHR SSCR.

We prepared, in consultation with the Directors of these PRUs and SSCR, tables listing all the relevant research projects; for each we gave an indication of their lead researcher, main research themes and planned completion dates. We grouped the projects for this purpose under the seven 'Ps' of the Vision for Adult Social Care together with a few additional themes.

Output

We presented this material at a showcase event for the Department on 21 February 2013, which included helpful discussion between the Department and researchers. A short paper summarising

the plans, to accompany the tables distributed at the showcase event, was submitted to DH in spring 2013.

Research team

Raphael Wittenberg (lead), Martin Knapp (PSSRU, LSE) and Michael Clark (NSSCR, LSE)

1.3 2030 health care scenarios – exploring potential changes in health care in England over the next 20 years

The purpose of this invited report was to feed into the Quality, Innovation, Productivity and Prevention (QIPP) programme of the English NHS by stimulating debate about the opportunities and risks associated with delivering an affordable health care system over the next 20 years. As there are many factors that will influence health care in the future, PIRU was asked to conduct a scenario planning exercise in 2011 and 2012 to explore political, social, economic and technological trends and develop a set of possible and plausible futures.

The scenarios were developed through a combination of desktop research, one-to-one interviews with key informants, and a stakeholder workshop. The scenarios were then further refined through a series of additional interviews, as well as feedback sessions to the DH and the project advisory board. PIRU developed four scenarios based on two trends which were seen as significant in influencing the future shape of healthcare yet uncertain in their possible future pathway – degree of adoption of new technology; and the role of service users and communities in taking responsibility for their own health, and exercising choice and control over services:

1. *The Gadget Show* - High technology adoption with high public engagement
2. *Plural Provision* - Low technology adoption with high public engagement
3. *Stability with Integration* - Low technology adoption with low public engagement
4. *Modern Traditional* - High technology adoption with low public engagement

While each of these individual scenarios presents specific issues around the provision of health care, three themes are common to all:

1. The challenges of addressing health inequalities are likely to continue
2. Despite the possibility of new technologies, the demand for provision of long term care for older people is unlikely to fall
3. The development of new technologies and improvements in software compatibility is likely to raise information governance issues.

The scenarios provide a useful framework for exploring the potential opportunities and risks of commissioning health care in the NHS over the next 20 years.

Output

The findings were presented at a number of conferences, meetings and workshops, and were reported in the Health Service Journal.

(<http://www.hsj.co.uk/home/innovation-and-efficiency/how-the-nhs-will-look-in-2030/5062836.article?blocktitle=Latest-Resources&contentID=8723#.UkVmA41wBIU>)

The PIRU report on the project is to be found at:

http://www.piru.ac.uk/assets/files/Piru_Twenty-Thirty%20final.pdf

Research team

James Barlow (lead, Imperial College) and Chris Evennett (Health eFutures)

1.4 Workshop on payment for performance in health and other public services

Payment of performance (P4P) is an aspiration for the UK Government across many sectors of policy, and a number of schemes are currently underway in different settings. Despite this interest, the evidence available to guide scheme development, implementation and evaluation remains limited. It is difficult to generalise about the benefits, risks and costs of P4P, and there are a number of concerns related to sustainability and the long-term effects of the schemes. PIRU provided some early advice on the approach to the evaluation of the Government's drug and alcohol 'payment by results' pilots (see below) and recognised that P4P was an area where developing some expertise would be helpful in future.

In February 2013, on behalf of the DH, PIRU brought together research and policy experts for an event over two days to try to identify the main strengths and weaknesses of different forms of P4P; contribute to the design of a typology of P4P schemes useful to policy advisors; provide implementation guidance for those working in the field; identify potential areas for the future application of P4P; scope a future research and evaluation agenda; and identify the main challenges in evaluating such schemes.

Before the workshop, participants received a briefing document providing background information, highlighting the key unanswered questions in design, implementation and evaluation for discussion. After the workshop, the briefing paper was revised in light of the discussions and was published as a PIRU report, a further seminar was presented in the DH for staff unable to attend the workshop and guidance materials for DH officials and researchers were prepared on the design, implementation and evaluation of P4P schemes.

This work sharpened PIRU's understanding of current issues surrounding P4P schemes. As a result, the Unit has been able to undertake the evaluation of the Department of Health's social impact bond Trailblazers, which started in January 2014 on the basis of prior knowledge (see below).

Output

Link to workshop presentations, slides and blogs: <http://www.piru.ac.uk/events/payment-for-performance.html>

The PIRU report is to be found at:

<http://www.piru.ac.uk/assets/files/Challenges%20of%20payment%20for%20performance%20in%20healthcare%20and%20other%20public%20services%20final.pdf>

Research team

Mylene Lagarde (lead), Julie Nossiter, Nicholas Mays and Michael Wright (LSHTM)

1.5 Assessing Department of Health (social care) modelling requirements

A brief review was carried out of the demand for simulation modelling addressed at social care policy issues, DH internal capacity for delivering different simulation modelling approaches and potential external supply. The study included a survey with responses from 109 modelling experts in 49 organisations.

Output

A report was presented at a meeting at the DH in spring 2013. This identified a number of areas where simulation and modelling is perceived to be required, including workforce planning and evaluation of productivity, quality and outcomes. It also highlighted barriers to the supply of simulation modelling capacity, especially relating to expertise in social care rather than health care issues.

Research team

James Barlow (lead) and Steffen Bayer (Imperial)

1.6 Independent assessment of improvements in dementia care and support since 2009

This project, undertaken in association with the NIHR School for Social Care Research, included an assessment of trends in dementia care and support since the publication of the national Dementia Strategy in 2009, but also an analysis of information gaps and future research needs in order to be able better to understand progress in the future, and to provide a platform for developing the government's next national dementia strategy.

Output

A report, not for publication, was prepared in May 2014 for the Department of Health, and was passed to senior officials and ministers (Secretary of State and Minister of State for Care and Support). In view of the level of interest in the topic, PIRU intends to distil the main conclusions from the report and submit them as an essay to the *BMJ* in autumn 2014.

Research team

Martin Knapp (lead), Josie Dixon, Jacqueline Damant and Amritpal Rehill (LSE), Nick Black and Stefanie Tan (LSHTM)

1.7 Analysis of research templates submitted to the DH R&D Committee

In May and June 2013, following the summary of research described above in 1.2, PIRU undertook an assessment for DH RDD of the topics and questions included in templates submitted to the new DH R&D Committee in April 2013 from within DH and by arm's length bodies to see if they were high priorities for research, how they might be met and what role, if any, PIRU could play.

Theme 2: Methods for evaluation of complex interventions

Strand 1: Evaluation of complex interventions

2.1 Evaluation of the National Cold Weather Plan for England

The government has developed a National Cold Weather Plan to advise local health and social care organisations on what should happen before and during severe cold weather in order to reduce risks and help protect vulnerable (especially older) people. PIRU evaluated the extent to which the Plan was implemented at the local level, whether it reached its target groups and could be cost-effective, and how it may be improved in future years. The evaluation had four objectives: 1) a time series analysis (20+ years) of regional mortality and health care use data linked to weather data in order to characterise weather-health relationships and their yearly variations; 2) simulation modelling of more extreme weather events to examine the health impacts of these events and the costs and benefits of the Plan in mitigating these impacts; 3) actions taken at local level by the health and social care system and their estimated cost; and 4) a small-scale preliminary study among a group of at-risk people to assess whether cold weather alerts and subsequent actions taken by professionals reach their target groups, and how people view and respond to these messages. Objectives 3 and 4 involved: documentary analysis and qualitative interviews with health and social care staff in 10 local authority areas spread throughout the country; a survey of community and primary care nursing staff (in collaboration with the Royal College of Nursing); and qualitative interviews with adults aged 65+ years in two local authority areas.

The project started in November 2012 and data collection was completed in May 2013. Initial results were presented to Public Health England and the Department of Health at a seminar on 1st July 2013.

Output

The final report is currently being revised along with several journal articles for submission in autumn 2014.

Research team

Bob Erens (lead), Nicholas Mays, Lorelei Jones, Ben Ritchie, Paul Wilkinson, Shakoor Hajat, and Zaid Chalabi (LSHTM)

2.2 Evaluation of the Public Health Responsibility Deal

The Public Health Responsibility Deal (RD), launched in March 2011, brings together public sector, academic, commercial and voluntary organisations to help meet public health goals. Partners who sign up to the Responsibility Deal are committed to take action to improve public health by pledging to change their services and/or products in ways that are regarded as positive for consumer health. The RD covers food, alcohol, physical activity and health at work.

In 2012 PIRU provided advice to the Department of Health on the options for the design of an evaluation of the Public Health RD as well as conducting preliminary evaluative work, leading to the development of a detailed logic model and description of our overall approach to the evaluation in a paper which was published in *Journal of Public Health* (see link below). The logic model and the evaluation methods were informed by a scoping review which examined barriers and facilitators to the success of voluntary agreements, which was published in *Health Policy* (see link below).

In January 2013, PIRU began a three year project involving a full-scale evaluation of the RD. This involves 40-50 in-depth interviews with participants and non-participants in the RD to study the process and implementation issues. A smaller number of in-depth case studies of organisations involved in the RD (n=5 to 10) are also being conducted to help understand the practical implications of participating, and the incentives and disincentives to doing so. A further strand of work led by Ellen Nolte (RAND Europe) is examining progress using regulatory and non-regulatory approaches in other countries. This research is based on document analysis, analysis of other data sources, and individual interviews. Other research as part of this evaluation involves assessing the potential impact of the pledges on health outcomes, and an assessment of the implementation of pledges.

Output

Outputs to date comprise:

- A scoping literature review in *Health Policy*
<http://www.sciencedirect.com/science/article/pii/S0168851013000614>
- A paper describing the logic model and general approach to the evaluation published in *Journal of Public Health* <http://www.ncbi.nlm.nih.gov/pubmed/23885025>
- A number of presentations, such as
http://download.thelancet.com/flatcontentassets/pdfs/public-health/Public_Health_Abstracts_ALL_Part9.pdf

Outputs in 2014 will include an assessment of the potential impacts of the alcohol and food network pledges on health outcomes based on existing evidence, an assessment of the 'additionality' of the

pledges in these networks if implemented fully and a comparison of the RD with similar schemes in other countries. This work has resulted in two new papers evaluating progress on the alcohol pledges, and a further paper assessing international experience in alcohol labelling. These were submitted to DH in June 2014 for information and comment. After final revisions, two of the three papers have been submitted to journals. Two further papers evaluating the food network pledges and a further paper on experience in other countries (this time on salt reduction) will be submitted to DH for information and comment in September 2014. Coding/analysis of the qualitative data is ongoing with the first main paper due to be submitted to DH before the end of the year.

Research team

Mark Petticrew (lead), Nick Douglas, Mary Alison Durand, Elizabeth Eastmure, Lorelei Jones, Lucy Goulding, Cecile Knai, Nicholas Mays (LSHTM), Teresa Bienkowska-Gibbs, Josephine Exley, Ellen Nolte, Eleanor Winpenny (RAND Europe)

2.3 Evaluation of the choice of GP practice pilot

The Choice of GP Practice pilot allowed patients who live outside a practice's catchment area to either register with a volunteer pilot practice or attend the pilot practice as a day patient. The pilot period was from April 2012 to March 2013 during which time PIRU evaluated the early implementation of the scheme in the four PCT areas that volunteered for the pilot. The study described the uptake of the pilot and provided a preliminary assessment of its potential costs and benefits ahead of a decision by NHS England in autumn 2013 as to whether the scheme, or a modified version, should be made available to more or all parts of the country.

The evaluation of the first 12 months comprised:

- Collation of quantitative administrative and clinical data on patients in the pilot
- Semi-structured qualitative interviews with:
 - Patients choosing one of the pilot practices
 - GPs and practice managers in pilot practices
 - Staff in pilot PCTs and a representative from the Local Medical Committee (LMC) in each area
- A web-based survey of clinical and managerial staff in all practices participating in the pilot
- A postal survey of pilot patients
- A discrete choice experiment and web survey with members of the public to inform an estimate of the value of the additional choice offered through the pilot in relation to the net costs of the pilot
- A review of other European countries' experience with managing patient choice of GP.

Output

An interim final report was produced in early July 2013 so as to be available to contribute to NHS England's decision making on whether the pilot should be rolled out. The final report was published in March 2014.

The final PIRU report can be found at:

<http://www.piru.ac.uk/assets/files/General%20Practice%20Choice%20Pilot%20Evaluation.pdf>

The report on experiences of GP choice in other countries can be found at:
<http://www.piru.ac.uk/assets/files/Choice%20of%20primary%20care%20provider%20-%20a%20review%20of%20experiences%20in%20three%20countries%20final.pdf>

Research team

Nicholas Mays (lead), Elizabeth Eastmure, Stefanie Tan, Bob Erens, Mylene Lagarde (LSHTM), Ellen Nolte, Celine Miani and Emma Pitchforth (RAND Europe)

2.4 Early evaluation of the integrated care and support Pioneers in the context of the Better Care Fund

PIRU is undertaking a largely qualitative early evaluation of 14 Integrated Care and Support Pioneers in the context of the deployment of the Better Care Fund between January 2014 and June 2015. The purpose of the early evaluation is to understand the ingredients of, and assess progress towards, integration between health, social care and other services designed to increase person-centred coordinated care. There will be further, long-term evaluation of the 'Pioneers' from July 2015. This is currently being competitively tendered and PIRU has submitted a bid for this work.

Output

A first interim report of the early evaluation, not for publication, was produced in July 2014. The first report for publication will be prepared by December 2014.

Research team

Bob Erens (lead), Nick Douglas, Lorelei Jones, Sandra Mounier-Jack, Nicholas Mays (LSHTM), Gerald Wistow (LSE), Martin Bardsley and Judith Smith (Nuffield Trust)

2.5 Evaluation of social impact bond (SIB) Trailblazers in health and social care

PIRU was approached by DH to undertake an evaluation of the SIB Trailblazers. The objectives of the project being undertaken between January 2014 and December 2015 are to:

1. Develop a conceptual framework to help understand the potential role and effects of SIBs compared with other approaches to paying for public services. This component will help orientate the subsequent empirical parts of the project.
2. Describe and assess the development of the nine SIB Trailblazers in order to identify obstacles and enabling factors in finalising SIB contracts.
3. Describe and characterise the signed SIB contracts in order to unpack the implications in terms of incentives and risk-sharing arrangements for the different parties.
4. In a second phase, assess, if feasible, whether the SIB contract mechanism enables achievement of better outcomes than alternative funding mechanisms, at what cost, and if outcomes are better, to explore the reasons behind such differences.

Output

The first interim report will be produced at the end of December 2014.

Research team

Mylene Lagarde (lead), Nicholas Mays, Stefanie Tan (LSHTM), Emma Disley, Chris Giacomantonio and Jennifer Rubin (RAND Europe)

2.6 Evaluation of direct payments in residential care Trailblazers

This project evaluates the introduction of Direct Payments (DPs) in Residential Care in Trailblazer areas. It followed the scoping study described below. DH selected 20 Trailblazers from those which had expressed interest, of which 17 still plan to offer DPs. Each Trailblazer has considerable freedom to determine which users or user groups will be offered DPs, what the weekly amounts of the DPs will be and how they can be used.

Given that a policy decision has already been made to enable all local authorities to offer direct payments in residential care from April 2016, the aims of the project are:

1. To understand the different ways in which DPs are being offered to residents of care homes and to examine the challenges arising from implementing DPs for users, care home providers, and councils and their staff in Trailblazer sites (*process evaluation*).
2. To assess the impact of DPs in residential care on users and their families, care home providers and the provider market, and councils and their staff (*impact evaluation*).
3. To examine, as far as possible, the relative costs and cost-effectiveness of different approaches to providing DPs for residential care, for both users and their families and local councils (*economic evaluation*).

Qualitative work includes interviews with samples of residents who have been offered a DP and accepted and residents who have been offered a DP and have declined, their families, frontline adult social care staff, Trailblazer project managers in councils, care home managers and/or owners, and representatives of national organisations active in the adult social care sector. Quantitative work includes collection and analysis of data on numbers of people offered and taking up DPs for residential care and of those who have been offered a DP and declined, costs to councils and to users and their families, impacts on providers and outcomes for users. The evaluation will conduct a number of surveys: a survey of users who take up DPs in residential care and their family members, with 6 and 12 month follow up; a survey of users offered DPs in residential care who decline them and their families; and a survey of care home managers and/or owners.

Output

Preliminary findings will be reported in December 2014 and June 2015. The final report is due in June 2016.

Research team

Raphael Wittenberg (lead), Jackie Damant, Daniel Lombard, Margaret Perkins, Martin Knapp (LSE), Stefanie Ettelt, Nicholas Mays and Lorraine Williams (LSHTM)

Strand 2: Improving evaluation methods

2.7 Alternative methods for handling selection bias

Almost every evaluation of pilots of a new approach has to tackle the potential for selection bias when comparing the new with the previous arrangements. This raises issues at each stage of the evaluation including how to select pilots and controls, what to measure, for how long, which analytical method(s) to choose, and how to present the results. The aim of this strand is to illustrate the methodological alternatives faced at each stage, and to consider the potential impact on the results of alternative methodological choices.

In the first phase of this work we have considered two specific methodological issues of general relevance to the evaluation of pilots. Each issue has been considered in the context of a high-profile case study.

Methodological issue 1: evaluating pay-for-performance schemes in health care: examining the use of a synthetic control approach.

A common concern when evaluating policy pilots is that in the general absence of RCT data, policy recommendations from any evaluation suffer from selection bias due to residual confounding. The objective of this study is to critically examine the use of a relatively new approach to evaluating area level interventions known as the ‘synthetic control’ method (Abadie and Gardeazabal, 2003; Abadie et al., 2010). The synthetic control approach is a generalisation of the difference-in-differences (DiD) method. While DiD assumes that unobserved common effects do not vary over time, the synthetic control method allows aspects of these effects to vary.

The study contrasted the synthetic control method with traditional approaches for evaluating pay-for-performance (P4P) programmes in health care. Specifically, we re-estimated the effect of the Advancing Quality (AQ) program (Sutton et al., 2012) on 30-day in-hospital mortality for conditions incentivised by the AQ (pneumonia, heart failure, myocardial Infarction), as well as for non-incentivised conditions.

The effect of P4P on the treated unit (the North West of England) was estimated by constructing a ‘synthetic control group’. The synthetic control group is a weighted combination of the control units (here, the other regions in England) that had pre-treatment characteristics and ‘outcomes’ that matched the treated unit as closely as possible. In contrast to the original DiD analysis, the synthetic control method found that, for the incentivised conditions, the P4P scheme did not significantly reduce mortality, and that there was a statistically significant increase in mortality for non-incentivised conditions.

The re-analysis of the AQ program recognised methodological challenges that pervade the introduction of new policy pilots in health care more generally, by, for example, recognising that data were available at various levels of aggregation (region, hospital, patient, time period). Insights from this re-analysis have implications for further PIRU research into re-evaluation of other financial incentive schemes, such as the Best Practice Tariffs (BPTs).

Output

Results were presented at a DH analysts’ seminar (11 December 2013), at the UK Causal Inference methodology workshop in Cambridge (May 2014), at a joint LSHTM/UCL/IFS workshop (October 2014) and at the American Health Economics Society meeting in Los Angeles (July, 2014). A paper has been submitted to the *Journal of Health Economics* (July 2014).

Research team

Richard Grieve, Noemi Kreif (LSHTM), Matt Sutton (Manchester), Dominik Hangartner (LSE)

Methodological issue 2: approaches for evaluating the effectiveness and cost-effectiveness of continuous treatments

Most evaluation approaches are designed to evaluate alternative forms of service provision or treatment where the intervention is defined as a binary variable (e.g. new versus existing form of service provision). However, this definition may be insufficient to inform policy recommendations from evaluations of policy pilots, where the intervention may be continuous (e.g. level of financial incentive). Previous methodological work has considered the evaluation of continuous treatment effects in the context of ‘dose-response’ studies, but they have yet to be considered in the context

of broader evaluations, and more generally there is little work contrasting alternative statistical approaches for evaluating continuous treatment effects.

The objective of this study was to compare regression and propensity score approaches for addressing selection bias when evaluating continuous treatment effects. With either regression or propensity score approaches, model misspecification can lead to biased estimates. This work also introduced a machine learning approach, the 'Super Learner', to estimate both the propensity score and the parametric dose-response function. The Super Learner selects the convex combination of candidate estimation algorithms, to create new estimators. We took a two stage estimation approach whereby the Super Learner selects a propensity score, and then a dose-response function conditional on the propensity score. We compared this approach to parametric implementations. We considered these alternatives in re-analysing a published evaluation of alternative ways of organising neuroscience services for patients following acute traumatic brain injury (TBI). The primary study compared an intervention group who had 'early transfer' to a specialist regional neuroscience centre (within 18 hours of initial hospital presentation), versus 'no or late transfer' (after 24 hours) for adult patients with acute TBI. The re-analysis compared the alternative approaches by reporting mortality at alternative times to transfer to specialist care (up to 24 hours). With parametric models for the outcome we find that dose-response curves differ according to choice of parametric specification. With the Super Learner approach to both the regression and propensity score approaches, we find that transfer time does not have a statistically significant marginal effect on the outcome. We conclude that machine learning is an attractive approach for estimating the effects of continuous treatments more generally in policy evaluations.

Output

Preliminary results were presented at a seminar at York University (March 2014) and at the UK Causal Inference methodology workshop in Cambridge (April, 2014). In July 2014, a paper was submitted to the European workshop in Health Economics and Econometrics, and accepted for presentation (Munich, September 2014).

Research team

Richard Grieve, Noemi Kreif (LSHTM), Ivan Diaz (Johns Hopkins, Bloomberg, School of Public Health), Kathy Rowan, David Harrison (ICNARC), Martin Smith (UCL), David Menon (Cambridge)

Strand 3: Scoping and early development of evaluations

2.8 Prison Drug Recovery Wing (DRW) pilot – early scoping work

The DRW is a potentially innovative approach to treatment for prisoners who misuse drugs (or alcohol) and is focused on abstinence, freedom from drugs of dependence, provision of services and advice in a central location, formal peer support, and connecting offenders with community treatment services on release. The DRWs are expected to place a strong emphasis on connecting offenders with a wide range of community services to help them to live drug-free lives on release. DRW pilot schemes were launched in two tranches: in June 2011 in five prisons and in April 2012 in 11 prisons. The pilot sites were given the flexibility to design DRW models appropriate to their context and offender population. Before the DH commissioned an evaluation team to investigate the success of the DRW pilots, the Department asked PIRU to undertake some early scoping and feasibility work on approaches to evaluation, and potential outcome measures, which could be used to inform the planned evaluation.

PIRU's scoping and feasibility work involved visits to ten of the DRW pilot sites, interviews with key informants from these sites and a review of the draft models of recovery prepared by each pilot. PIRU wrote two notes of advice for the Department providing descriptions of how the DRW pilots

have been implemented at the local level and the implications of local variations for the evaluation.

Both guidance notes are available on the PIRU website:

http://www.piru.ac.uk/files/PIRU_DRW_pilots_May_2012.pdf

http://www.piru.ac.uk/files/PIRU_DRW_pilots_December_2011.pdf

Research team

Bob Erens (lead) and Nicholas Mays (LSHTM)

2.9 Evaluation of the Drugs Payment by Results Pilot – early scoping work

The DH, the National Treatment Agency and a number of other Government Departments developed pilots in order to reward and incentivise providers that support individuals to recover from their drug and alcohol dependence. The aim of the pilots is to focus on a holistic approach to long-term recovery for the individuals and their families and communities. PIRU was asked by the DH to provide advice on how the pilots could be evaluated and the outcomes measured.

PIRU prepared a guidance note for the DH in August 2011 which included comments on the outcome measures proposed for the payment by results (PbR) model, and highlighted some of the key issues for the evaluation team to consider, such as potential difficulties comparing pilot sites with one another or with control areas because of the lack of randomisation and the different ways local pilot sites implemented the PbR scheme (in terms of outcomes monitored, level of payments, etc). The guidance note is available on PIRU's website:

<http://www.piru.ac.uk/files/Drugs%20Recovery%20PbR%20Note%20of%20Advice.pdf>

Research team

Bob Erens (lead), Nicholas Mays (LSHTM), Martin Knapp (LSE), Martin Roland (RAND Europe)

2.10 Evaluation of direct payments in residential care pilot – early scoping and feasibility work

The DH is currently piloting direct payments for adults in residential care to find out how these can give residents and their families control over resources available to pay for their care. DH selected 20 local authorities from among those who volunteered to become Trailblazer sites (but 3 have dropped out). The DH requested PIRU to undertake a scoping and feasibility study to assist DH in making choices about the evaluation design.

The specific objectives of the study were to describe how each site approached the implementation of direct payments in residential care; which models of deploying direct payments had emerged in sites; how Trailblazer sites differed in their approach to organising residential care; and which systems were in place for managing and monitoring direct payments. The study also included a rapid review of the evidence on the cost and benefits of previous direct payment schemes in social care in England and elsewhere, and considered the feasibility and appropriateness of the use of comparator groups and specific outcome measures in any subsequent evaluation. The study suggested that the numbers of DP users to be recruited by Trailblazer sites are likely to be small, with an estimated maximum of 500 across all user groups (i.e. frail older people, people with learning and/or physical disabilities, people with mental health problems) and that approaches to offering DPs will vary considerably between sites. The programme does not therefore lend itself to be studied using a randomised controlled design.

Output

The project reported in November 2013. A PIRU report published in March 2014 can be found at:

<http://www.piru.ac.uk/assets/files/DP%20Trailblazer%20Preliminary%20report.pdf>

Research team

Raphael Wittenberg (lead), Margaret Perkins and Martin Knapp (LSE), Stefanie Ettelt, Nicholas Mays, Bob Erens (LSHTM)

2.11 Innovation Health and Wealth Strategy (IHW): scoping of a programme of evaluation

PIRU supported the DH in identifying which aspects of the IHW programme should be prioritised for evaluation, what the linkages are between different IHW actions, and what approaches to evaluation should be adopted. The work resulted in an Invitation to tender for a comprehensive evaluation programme.

Output

A draft invitation to tender identifying the most worthwhile actions for evaluation.

Subsequently, a proposal to explore the potential for a 'global healthcare innovation index' has been supported by PIRU (see Other Projects).

Research team

James Barlow (lead), Steffen Bayer (Imperial) and Nicholas Mays (LSHTM)

2.12 New Medicines Service evaluation specification

The New Medicines Service (NMS) provides support for people with long-term conditions newly prescribed a medicine to help improve adherence to medicines. It began in October 2011, and focused on particular patient groups and conditions. It is currently due to end in September 2013, unless it has proven its value to the NHS (which will include evidence from a DH-funded evaluation).

PIRU was asked, under its responsive research capacity, to prepare the specification for the DH-funded national evaluation of the NMS. Nicholas Mays was then asked to sit on the DH PRP commissioning group to select from the proposals submitted. He also chaired the DH steering group for the evaluation which includes DH policy 'customers' and representatives of the main stakeholder groups involved in or affected by the NMS. The evaluation, in the form of an ambitious RCT, was successfully completed to time with a final report submitted at the end of March 2014 and published in August.

Output

A draft invitation to tender was produced for DH RDD.

Research team

Phil Davies (Oxford Evidentia) and Nicholas Mays (LSHTM)

2.13 NHS Dental Contract Pilots: proposal for evaluation

In late 2010, before PIRU formally began work, the Unit was asked whether it would be interested to design an evaluation of the NHS Dental Contract Pilots, with a view to undertaking the resultant study. The pilots were to contribute to the development of a new NHS community dental contract to be implemented before the 2015 general election. Over almost 12 months, a considerable amount of work was undertaken to identify suitable routinely available data and design a study comparing the three pilot types with ordinary practice. However, the dental policy team eventually decided that the Department did not require the sort of evaluation offered by PIRU, despite extensive discussions with the potential research team, and a decision was taken to proceed with another contractor and a very different approach to evaluation.

Output

A detailed research proposal for a quasi-experimental evaluation was produced.

Research team

Nicholas Mays (lead), Mark Pennington, Richard Grieve and Bob Erens (LSHTM)

2.14 Advice on options for evaluation of Children's and Young People's Improving Access to Psychological Therapies Programme (CYP IAPT)

Nicholas Mays, in collaboration with Catherine Law (PRU in Children, Young People and Families), advised DH and NHS England on options for the approach to evaluation of the CYP IAPT programme, May-July 2014. The work involved a critical review of an earlier draft specification for a possible evaluation and a paper outlining the main options for questions that any evaluation might be designed to answer, plus a series of discussions with policy 'customers', some of the latter also involving John Brazier (PRU in Economic Evaluation of Health and Care Interventions).

Output

A note critiquing a previous draft invitation to tender and a short options paper for future evaluation.

Research team

Nicholas Mays (LSHTM) and Catherine Law (ICH, UCL)

Strand 4: Improving methods and use of evidence syntheses

2.15 Development of an Evidence Synthesis Framework

The increased demand for evidence-based policy and practice in recent years has provoked a parallel increase in diverse approaches to evidence synthesis designed to meet potential users' needs. Yet matching different users' knowledge needs to the most suitable form of evidence synthesis can be challenging, and potential users may not know what the pros and cons of different forms of synthesis might be in any given situation.

Colleagues elsewhere at LSHTM have had similar concerns and have taken the lead, with help from PIRU, to develop a so called Evidence Synthesis Framework to help knowledge users, brokers, commissioners and producers decide which output best meets an identified information need. The Framework characterises each of ten distinct forms of evidence synthesis in terms of – readability, relevance, rigour and resources required. The Framework should facilitate a more systematic assessment of the balance of essential characteristics required in any given situation.

Output

A draft journal paper has been produced and is undergoing revision prior to submission.

Research team

Deepthi Wickremasinghe, Bilal Iqbal Avan, Mark Petticrew and Nicholas Mays (LSHTM)

Theme 3: Making better use of administrative data for policy/pilot innovations

3.1 Evaluation of Met Office COPD forecast alert service 'Healthy Outlook'

This service provided by the Met Office issued automatic, personalised telephone alerts delivered direct to enrolled patients' homes during periods when the risk of exacerbation of COPD was

assessed to be high on the basis of weather forecasts and infectious disease data. General practices in up to 17 PCT areas have offered the service to their COPD patients since 2006/07.

The PIRU evaluation focused on the impact of the service on accident and emergency (A&E) department attendances, hospital admissions and mortality for COPD, and selected associated costs, by linking COPD patients in the scheme with existing data sets, including hospital episode statistics (HES), A&E attendances and mortality.

'Healthy Outlook' participants' use of hospital services, costs and mortality was compared with matched controls for the period 2006/07 to 2011/12 by season and in relation to risk factors such as low outdoor temperatures and flu levels. Matching was on individual level variables such as prior utilisation history, the presence of chronic disease as recorded in HES, and social and economic characteristics of area of residence.

Over the 12 months following enrolment, *Healthy Outlook* enrolees experienced more COPD admissions than matched controls (adjusted rate ratio 1.26, 95% CI, 1.05 to 1.52) and more outpatient attendances (adjusted rate ratio 1.08, 95% CI 1.03 to 1.12). However, enrolees had lower mortality rates over 12 months (adjusted odds ratio 0.61, 95% CI, 0.45 to 0.84). It is interesting to note that the Met Office decided to discontinue the service before the findings of the PIRU evaluation became available despite being aware of the existence of the study.

Output

The project reported in July 2013. The project report took the form of a journal article with detailed methods appendix. The revised paper has been published in the *Journal of Public Health*: <http://www.piru.ac.uk/assets/files/J%20Public%20Health-2014-Steventon-pubmed-fdu042.pdf>

Research team

Adam Steventon (lead), Martin Bardsley (Nuffield Trust) and Nicholas Mays (LSHTM)

3.2 Exploiting health and social care databases for policy making and policy evaluation: setting out some options for PIRU

PIRU's long-term work programme is committed to making greater use of routine administrative data for policy evaluation. We initially undertook a review which scoped the range and availability of large, national health and social care datasets and examined key issues to do with accessing and linking these different datasets for use in evaluations.

Output

The work resulted in an unpublished, internal report for PIRU's Management Team in July 2011 setting out options for accessing and applying use of national datasets to evaluation studies.

Research team

David Taylor and Bob Erens (LSHTM)

3.3 Use of national clinical datasets to inform and evaluate health care policy

Following the project in 3.2, above, we then carried out a more focused review looking at how some of the largest national clinical datasets have been used by policy-makers to inform national health care policies in England. This work identified the potential for greater use of these databases in future evaluations.

Output

The project resulted in an article published in *Health Policy* in October 2012:
<http://www.healthpolicyjrn.com/article/PIIS0168851012002886/abstract>

Research team

Nick Black (lead) and Stefanie Tan (LSHTM)

Theme 4: Improving commissioning, execution and use of policy evaluations

4.1 How DH-led pilots of policy innovations and their evaluations inform policy development

This project involves a retrospective analysis of how three major recent DH-initiated pilots were evaluated and how the findings were used in the policy process. There have been a large number of pilots and demonstration projects led and/or sponsored by the DH in the last decade, most with some evaluation. The evaluations varied in their sophistication, scale and objectives. The analysis examines why and how these pilots were developed; how they were implemented; how evaluation was commissioned and how the research design was determined; and how findings from evaluation were used for policy decision-making. This study includes interviews with DH officials, pilot site managers and evaluators (n=30), as well as an analysis of documents, such as policy statements and evaluation reports.

Findings suggest that the policy pilots included in this study were initiated for a variety of reasons, which included piloting for the purpose of experimentation (as two evaluations involved experimental study designs), but also for the purpose of supporting policy implementation. While these purposes were officially portrayed as being mutually reinforcing, each brings with it different assumptions about the role of evaluation in policy development, some of which could not be reconciled. Policy-makers appeared to attribute much value to experimental research designs, yet there is little evidence to suggest that the findings from such studies had much impact on policy or that they were easy to accommodate in a policy process that largely built on pre-existing commitments.

Fieldwork is now complete with plans for a further prospective case study and an international comparative study.

Output

Initial results were presented at the Policy & Politics Conference in Bristol in September 2012, a DH seminar in February 2013 (the slides are available on the PIRU website), a Wellcome Trust Health, History & Policy workshop on policy pilots in April 2013, the European Health Policy Group and the Health Policy and Politics Network in September 2013, the Annual Conference of the Social Research Association in December 2013, the Social Services Research Group Annual Workshop in March 2014 and the UKES Annual Evaluation Conference in April 2014.

Two papers have been submitted to the *Journal of Social Policy* (revised and resubmitted) and *Political Studies* (under review). It is intended to prepare a short briefing note for DH policy officials on developing and commissioning evaluations of pilot schemes that can be used by DH R&D staff to help their colleagues unfamiliar with the challenges of evaluating policy pilots.

Research team

Stefanie Ettelt and Nicholas Mays (LSHTM)

4.2 Advice to DH NHS Policy and Outcomes Group on building DH-research community relationships

Nicholas Mays advised the Department during March and April 2013 on the approach to building more systematic, stronger working relationships with the UK research and think-tank community relevant to the analytical and policy development needs of the NHS Policy and Outcomes Group and more widely. He also helped identify individuals and organisations that the Department should involve in this process.

Other projects

Developing a global index of health care innovation: scoping work

Staff in the Unit have identified a significant gap in knowledge about the pace and extent of health care innovation, in that there is no established method for comparing countries' performance in terms of health care innovation. Developing a health care innovation index would provide an assessment of where different countries stand in relation to their health care innovation capacity – their local capabilities for adopting innovative solutions developed elsewhere and for originating innovations themselves. This would provide insight into the UK's performance on health care innovation compared with other countries and the factors which could change that relative performance. We are working with the team that produced the Global Entrepreneurship and Development Index (GEDI) to develop a health care version.

This project (June 2014 to autumn 2014) involves resolving a range of conceptual, methodological and data issues prior to the more detailed work of building the index itself. The current scoping work may lead to a full proposal for funding, probably including funders such as BIS, DH and the TSB which would be worked up in autumn 2014.

Output

A scoping report and funding proposal for the development of the index will be prepared in late 2014.

Research team

James Barlow (lead), Erkkö Autio, Tiago Cravo-Oliveira (Imperial College)

Refinement of NHS Outcomes Framework indicators

As part of its responsive work, PIRU was asked to advise in Spring 2011 on the detailed definition of the indicators on ambulatory care-sensitive unplanned hospitalisations, avoidable emergency admissions and avoidable emergency readmissions that were to be used from April 2012 in the NHS Outcomes Framework.

Output

The Unit provided some advice based on expertise among its staff, including suggesting which PRU might more appropriately do any detailed indicator design work. This led to a rapid review of the evidence on using emergency readmissions as a potential indicator within the NHS Outcomes Framework, undertaken under the PRP-funded project 'An 'On-Call' Facility for International Healthcare Comparisons'.

Research team

Martin Roland, Ellen Nolte (RAND Europe) and Nick Black (LSHTM)

Indicators for measuring the quality of integrated care

As a preliminary part of the early evaluation of the integrated care and support Pioneers (described above under Theme 2, Strand 1), PIRU was asked to provide advice on indicators of integrated care for individual and collective progress monitoring using routine data. The work was undertaken between late November 2013 and mid-February 2014.

Output

A report was provided to the integrated care and support Pioneers team to help them determine their indicators of progress in integrated care:

<http://www.piru.ac.uk/assets/files/IC%20and%20support%20Pioneers-Indicators.pdf>

Research team

Veena Raleigh (King's Fund), Martin Bardsley, Paul Smith (Nuffield Trust), Gerald Wistow, Raphael Wittenberg (LSE), Bob Erens (lead) and Nicholas Mays (LSHTM)

Alternatives to antipsychotics for people with dementia

Managing neuropsychiatric symptoms and challenging behaviours in patients with dementia often involves the use of antipsychotic drugs. However, the use of these drugs pose considerable risk to patients, and current guidance is to use non-pharmacological interventions for treating these behavioural problems. However, the scientific evidence on the effectiveness of alternatives to antipsychotic drug prescribing has not been collected or assessed systematically. PIRU examined 30 recent systematic reviews in order to provide a comprehensive overview of the effectiveness of non-pharmacological interventions, in order to provide policy-makers, commissioners and clinicians with the best current evidence available.

Output

A report was provided to DH in 2011, and is available on the PIRU website:

http://www.piru.ac.uk/files/March%202012_PIRU%20Publication%202012-1.pdf

A poster presentation of the findings was given at the annual Health Services Research Network symposium in June 2012.

Research team

Bob Erens (lead), Nicholas Mays (LSHTM), Louise Lafortune (Cambridge University), Kelly Dickson, Josephine Kavanagh and James Thomas (EPPI Centre, Institute of Education)

Rapid evidence syntheses to support social care White Paper, 2012 process

PIRU was asked in September 2011 to provide rapid evidence syntheses on commissioning practices to improve quality in long term care, workforce practices to improve quality in long term care, and on health and social care integration and coordination.

Output

A set of short, rapid reviews was prepared between October 2011 and early January 2012, tailored to the needs of the White Paper team.

Research team

Jacqueline Damant, Juliette Malley, Valentina Lemmi, Gerald Wistow and Martin Knapp (LSE)

Why are numbers of people subject to the Mental Health Act rising year on year? Rapid evidence search and brief commentary

In June 2013, the Unit was asked if it could identify research and routine statistics that would shed light on the likely reasons for the rise in the number of people subject to the Mental Health Act in England. A rapid search of a wide range of bibliographic databases was conducted and routine data interrogated.

Output

An annotated bibliography with a short commentary was prepared within two weeks of the initial request.

Research team

Valentina Lemmi and Martin Knapp (LSE)

Loneliness and health in later life: scoping a potential rapid evidence synthesis

In August 2012, PIRU received a request from RDD to prepare a brief note for the Minister of State for Care Services to read on return from holiday identifying and summarising the evidence on the prevalence of 'loneliness' and its effects, particularly on health and in old age, with a view to scoping a rapid evidence review that could then be commissioned from PIRU.

Output

A short paper was prepared within 48 hours of receiving the request. However, the evidence review did not proceed due to a change of Minister.

Research team

Nicholas Mays (LSHTM)

Exploring the early workings and impact of Pathfinder GP Commissioning Consortia

In early 2011, PIRU was asked by DH to contribute to a study led by the PRU on Commissioning and the Healthcare System (PRUComm) that aimed to identify what was working well and what needed improving in the implementation of Pathfinder GP commissioning consortia (now known as clinical commissioning groups), how challenges were being met by consortia, and what were the key traits of effective commissioning organisations. PIRU designed the quantitative survey component of the study with a view to leading it. In the event, PRUComm went ahead without PIRU's involvement.

Output

PIRU contributed to a research proposal for DH led by PRUComm.

Research team

Bob Erens and Nicholas Mays (LSHTM)

Annexe 2: PIRU participants

PIRU is a collaboration between the London School of Hygiene and Tropical Medicine (LSHTM), the Personal Social Services Research Unit (PSSRU) at the London School of Economics and Political Science (LSE), Imperial College London Business School, RAND Europe and the Nuffield Trust. PIRU collaborates with a wide range of other organisations and individuals to undertake individual projects, as shown in the lists below.

Management Team

Nicholas Mays (Director), LSHTM
Bob Erens (Deputy Director), LSHTM
Mark Petticrew, LSHTM
Martin Knapp, PSSRU LSE
James Barlow, Imperial College Business School
Ellen Nolte, RAND Europe
Elizabeth Eastmure (Unit manager)

Administrative support

Paula Fry, LSHTM

Researchers involved in one or more projects since January 2011

LSHTM

Nick Black, Anna Bryden, Zaid Chalabi, Nick Douglas, Mary Alison Durand, Stefanie Ettelt, Lucy Goulding, Richard Grieve, Shakoor Hajat, Catherine Heffernan, Lorelei Jones, Cecile Knai, Noemi Kreif, Mylene Lagarde, Sandra Mounier-Jack, Julie Nossiter, Mark Pennington, Benjamin Ritchie, Stefanie Tan, David Taylor, Paul Wilkinson, Lorraine Williams, Michael Wright

PSSRU, LSE

Michael Clark, Jacqueline Damant, Josie Dixon, Dominik Hangartner, Valentina Lemmi, Daniel Lombard, Juliette Malley, Margaret Perkins, Amritpal Rehill, Gerald Wistow, Raphael Wittenberg

Imperial College Business School

Erkko Autio, Steffen Bayer, Tiago Cravo-Oliveira, Jane Hendy

RAND Europe

Teresa Bienkowska-Gibbs, Emma Disley, Josephine Exley, Céline Miani, Emma Pitchforth, Martin Roland (Cambridge University and RAND Europe), Jennifer Rubin, Eleanor Winpenny

Nuffield Trust

Martin Bardsley, Judith Smith, Paul Smith, Adam Steventon

King's Fund

Veena Raleigh

HealthFutures

Chris Evennett

EPPI-Centre, Institute of Education

Kelly Dickson, Josephine Kavanagh, James Thomas

ICNARC

David Harrison, Kathy Rowan

UCL

Martin Smith

University of Cambridge

David Menon

University of Manchester

Matt Sutton

Bloomberg, School of Public Health, Johns Hopkins University

Ivan Diaz

3ie, the International Initiative for Impact Evaluation

Phil Davies

CLAHRC CP and University of Cambridge

Louise Lafortune

Advisory Board

Nigel Edwards, Nuffield Trust (chair)

Don Brand, formerly DH

Ken Judge, University of Bath

Sue Richards, freelance consultant

Clive Smee, formerly DH

Sarah Stewart-Brown, University of Warwick

Colin Talbot, University of Manchester

Annexe 3: Outputs, January 2011-August 2014

Journal articles in submission or under revision

Exley JLR, Winpenny EM, Bienkowska-Gibbs T, Nolte E. The role of voluntary agreements to achieve public health goals: an exploration of salt reduction targets in four countries. To be submitted to *European Journal of Public Health*, September/October 2014

Knai C, Petticrew M, Durand MA, Scott C, James L, Mehrotra A, Eastmure E, Mays N. The Public Health Responsibility Deal alcohol pledges: are they likely to motivate action? Submitted to *Lancet*, August 2014

Knai C, Petticrew M, Durand MA, Eastmure E, Mays N. Are the Public Health Responsibility Deal alcohol pledges likely to be effective? A synthesis of the evidence. Submitted to *Lancet*, August 2014

Ettelt S, Mays N, Allen P. Does policy piloting contribute to evidence-based policy-making? Three examples from national health and social care policy in England. Revised and re-submitted to *Journal of Social Policy*, August 2014

Kreif N, Grieve R, Hangartner D, Turner T, Nikolova S, Sutton M. The synthetic control method compared to difference-in differences for evaluating health policies. Submitted to *Journal of Health Economics*, July 2014 and under review

Tan S, Erens B, Wright M, Mays N. Patients' experiences of the choice of GP practice pilot, 2012/13 Submitted to *BMJ Open*, July 2014 and under review.

Mays, N., Tan, S., Eastmure, E., Erens, B., Lagarde, M., & Wright, M. What is the impact of removing General Practice boundaries likely to be in the English NHS? Submitted to *Health Policy*, July 2014 and under review

Ettelt E, Mays N, Allen P. Policy experiments in health and social care: investigating effectiveness or confirming direction? Submitted to *Political Studies*, May 2014 and under review

Lagarde M, Erens B, Mays N. Preferences for GP practice in England: evidence from a Discrete Choice Experiment. Submitted to *Health Policy*, April 2014 and under review

Steventon A, Bardsley A, McKinstry B, Grieve R, Mays N, Barber N, Krumholz HM. After recent randomised controlled trials, is it now time to change our approach to evaluating telehealth? Submitted to *BMJ*, October 2013 and in revision

Published PIRU reports and journal articles

Tan S, Mays N. Impact of initiatives and programmes to improve patient access to, and choice of, primary and urgent care in the English NHS, 1997-2010: a systematic review. *Health Policy* 2014, Advance Access <http://dx.doi.org/10.1016/j.healthpol.2014.07.011> (Published 24 July 2014)

Steventon A, Bardsley M, Mays N. Effect of a telephonic alert system (*Healthy Outlook*) for patients with chronic obstructive pulmonary disease: cohort study with matched controls. *Journal of Public Health*, Advance Access doi:10.1093/pubmed/fdu042 (Published 10 July 2014) <http://jpubhealth.oxfordjournals.org/content/early/2014/07/09/pubmed.fdu042.abstract-hospitalisation>

Raleigh V, Bardsley M, Smith P, Wistow G, Wittenberg R, Erens B, Mays N. *Integrated care and support pioneers: Indicators for measuring the quality of integrated care*. Final report. PIRU Publication 2014-8. London: PIRU, April 2014
<http://www.piru.ac.uk/assets/files/IC%20and%20support%20Pioneers-Indicators.pdf>

Centre for History in Public Health and Policy Innovation Research Unit. *Policy pilots and evaluation*. History and Policy seminar report, April 2013. London: Centre for History in Public Health and Policy Innovation Research Unit, LSHTM, 2014
<http://history.lshtm.ac.uk/Policy%20Pilots%20report%20final%20version>

Ettelt S, Perkins M, Wittenberg R, Mays N. *Direct Payments in Residential Care Trailblazer Programme Evaluation*. Preliminary Report. PIRU Publication 2014-7. London: PIRU LSHTM and LSE, March 2014
<http://www.piru.ac.uk/assets/files/DP%20Trailblazer%20Preliminary%20report.pdf>

Mays N, Eastmure E, Erens B, Lagarde M, Roland M, Tan S, Wright M. *Evaluation of the Choice of GP practice pilot, 2012-13*. Final report. PIRU Publication 2014-6. London: PIRU LSHTM, March 2014
<http://www.piru.ac.uk/assets/files/General%20Practice%20Choice%20Pilot%20Evaluation.pdf>

Miani C, Pitchforth E, Nolte E. *Choice of primary care provider: a review of experiences in three countries*. PIRU Publication 2013-5. London: PIRU RAND Europe, 2013
<http://www.piru.ac.uk/assets/files/Choice%20of%20primary%20care%20provider%20-%20a%20review%20of%20experiences%20in%20three%20countries%20final.pdf>

Lagarde M, Wright M, Nossiter J, Mays N. *Challenges of payment-for-performance in health care and other public services – design, implementation and evaluation*. PIRU Publication 2013-4. London: PIRU LSHTM, 2013
<http://www.piru.ac.uk/assets/files/Challenges%20of%20payment%20for%20performance%20in%20healthcare%20and%20other%20public%20services%20final.pdf>

Barlow J, Evennett C. *Twenty-Thirty, Health Care Scenarios - exploring potential changes in health care in England over the next 20 years*. PIRU Publication 2013-3. London: PIRU Imperial College London, 2013
http://www.piru.ac.uk/assets/files/Piru_Twenty-Thirty%20final.pdf

Wittenberg R, Clark M. *Adult social care: summary of the research plans of the Department of Health Policy Research Units and the commissioned research of the NIHR School for Social Care Research*. London: PIRU LSE and NIHR School for Social Care Research, July 2013
<http://www.piru.ac.uk/assets/files/PIRU%20-%20SSCR%20Summary%20of%20research%20plans.pdf>

Petticrew M, Eastmure E, Mays N, Knai C, Durand MA, Nolte E. The Public Health Responsibility Deal: how should such a complex public health policy be evaluated? *Journal of Public Health* doi:10.1093/pubmed/fdt064
<http://jpubhealth.oxfordjournals.org/content/early/2013/07/23/pubmed.fdt064.full.pdf+html>
(Published 23 July 2013)

Bryden A, Petticrew M, Mays N, Eastmure E, Knai C. Voluntary agreements between government and business – a scoping review of the literature with specific reference to the Public Health Responsibility Deal. *Health Policy* 2013 <http://dx.doi.org/10.1016/j.healthpol.2013.02.009>
(Published 18 March 2013)

Bryden A, Petticrew M, Mays N, Eastmure E, Knai C. *Scoping review of evaluations of voluntary agreements between government and business*. London: PIRU LSHTM, 2012
[http://www.piru.ac.uk/assets/files/RD%20SCOPING%20lit%20review%20\(Bryden%20et%20al\),%201%20Apr%202012.pdf](http://www.piru.ac.uk/assets/files/RD%20SCOPING%20lit%20review%20(Bryden%20et%20al),%201%20Apr%202012.pdf)

Petticrew M, Eastmure E, Mays N, Knai C, Bryden A. The Public Health Responsibility Deal: how should such a complex public health policy be assessed? [Abstract] *The Lancet* 2012; 380: S11
doi:10.1016/S0140-6736(13)60367-0
<http://www.thelancet.com/journals/lancet/article/PIIS0140-6736%2813%2960367-0/abstract>
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Black N, Tan S. Use of national clinical databases for informing and for evaluating health care policies. *Health Policy* 2013; 109. 31-6. DOI: [10.1016/j.healthpol.2012.10.007](https://doi.org/10.1016/j.healthpol.2012.10.007)
<http://www.healthpolicyjrn.com/article/PIIS0168851012002886/abstract>

Erens B. *Prison Drug Recovery Wing (DRW) pilot – early scoping work: two guidance notes for DH*. London: PIRU LSHTM, December 2011 and May 2012
http://www.piru.ac.uk/files/PIRU_DRW_pilots_May_2012.pdf
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Barlow J, Hendy J. *Potential research priorities arising from proposals for NHS reforms in England*. PIRU Publication 2012-2. London: PIRU Imperial College London, 2012
<http://www.piru.ac.uk/assets/files/2012-2%20PIRU%20Publication.pdf>

Dickson K, Lafortune L, Kavanagh J, Thomas J, Mays N, Erens B. *Non-drug treatments for symptoms in dementia: an overview of systematic reviews of non-pharmacological interventions in the management of neuropsychiatric symptoms and challenging behaviours in patients with dementia*. PIRU Publication 2012-1. London: PIRU, 2012 <http://www.piru.ac.uk/assets/files/2012-1%20PIRU%20Publication.pdf>

Erens B, Roland M, Knapp M. *Evaluation of the Drugs Payment by Results Pilot – early scoping work: guidance note for DH*. London: PIRU LSHTM, August 2011
<http://www.piru.ac.uk/files/Drugs%20Recovery%20PbR%20Note%20of%20Advice.pdf>

Barlow J, Bayer S. Raising the profile of simulation and modelling in health services planning and implementation. *Journal of Health Services Research & Policy* 2011; 16: 129-130

Taylor D, Erens B. *Exploiting health and social care databases for policy making and policy evaluation: setting out some options*. Report to PIRU Management Team. London: PIRU, July 2011

Reports submitted to the Department of Health either not for publication or not yet published (excluding quarterly and annual progress reports on projects)

Exley JLR, Winpenny EM, Bienkowska-Gibbs T, Nolte E. *The role of voluntary agreements to achieve public health goals: an exploration of salt reduction targets in four countries*. Cambridge: PIRU RAND, August 2014

Douglas N, Erens B, Jones L, Mays N, Mounier-Jack S, Tan S, Wistow G. *Early evaluation of the Integrated Care and Support Pioneers Programme: working paper*. London: PIRU LSHTM and LSE, July 2014

Kreif N, Grieve R, Diaz I, Harrison D. *Health econometric evaluation of the effects of a continuous treatment: a machine learning approach*. Paper accepted for European Workshop in Health Economics and Econometrics, Munich, September 2014 and submitted to DH July 2014

Tan S, Mays N. *Impact of initiatives to improve access to, and choice of, primary and urgent care in the England: a systematic review*. London: PIRU LSHTM, 23 May 2014

Knapp M, Black N, Dixon J, Damant J, Rehill A, Tan S. *Independent assessment of improvements in dementia care and support since 2009*. London: PIRU LSHTM and NIHR SSCr, April 2014
Chalabi Z, Erens B, Hajat S, Heffernan C, Jones L, Mays N, Ritchie B, Wilkinson P. *Evaluation of the implementation and health-related impacts of the Cold Weather Plan for England 2012*. Final report submitted to DH. London: PIRU LSHTM, February 2014 and in revision after DH peer review

Mays N, Eastmure E, Erens B, Lagarde M, Roland M, Tan S, Wright M. *Evaluation of GP practice choice pilot: interim final report*. Prepared for the Department of Health and the Pilot Reference Group. London, PIRU LSHTM, July 2013

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Barlow J, Bayer S. *Using simulation and modelling for decision-making in social care policy and practice: demand and capacity in the UK*. London: PIRU Imperial College London, October 2012

Damant J, Malley J, Lemmi V, Knapp M. *Rapid evidence syntheses to support social care White Paper, 2012 process*. London: PIRU LSE. Reports prepared October 2011-January 2012 for the White Paper team

Reports planned for submission, September 2014-December 2015

Evaluation of the implementation and health-related impacts of the Cold Weather Plan for England 2012. Revised final report. November 2014

Adult social care: summary of the research plans of the Department of Health Policy Research Units and the commissioned research of the NIHR School for Social Care Research. London: PIRU LSE and NIHR School for Social Care Research, October 2014

Direct Payments in residential care Trailblazer Evaluation: First interim report. End December 2014.

Direct Payments in Residential Care Trailblazer Evaluation: Second interim report. End December 2015

Early evaluation of health and care integration Pioneers: second report. Autumn 2014

Early evaluation of health and care integration Pioneers: final report. June 2015

Evaluation of social impact bond trailblazers: interim report. December 2014

Evaluation of social impact bond trailblazers: final report. December 2015

Evaluation of the Public Health Responsibility Deal. Various reports in 2014 and 2015

Blogs (<http://blogs.lshtm.ac.uk/piru/>)

Don't ditch evaluations just because pilots are hitch-free. Nicholas Mays. 2 July 2014

Payment by results – a route to social policy innovation in nervous, cash-strapped times. Toby Eccles. 19 February 2013

Be pragmatic: ask not ‘whether’ but ‘how’ to adopt public sector performance-related pay. Simon Burgess. 19 February 2013

The Responsibility Deal – supersized health promotion. Mark Petticrew. 19 September 2012

Forging social care policy amid the white heat of a White Paper. Martin Knapp. 23 April 2012

Desperately seeking the Steve Jobs of healthcare modelling. James Barlow. 4 April 2012

Too much spin can seriously damage the health of spin-offs. Nick Mays. 7 February 2012

Alternatives to the chemical cosh. Bob Erens. 7 November 2011

How PIRU aims to make a difference. Nick Mays. 7 November 2011

Conferences organised (<http://www.piru.ac.uk/events/?filter=past>)

Evaluation – making it timely, useful, independent and rigorous. PIRU day conference in association with the Public Health Research Consortium and the NIHR School for Public Health Research. London: LSHTM, 4 July 2014

Adult social care research: a show case of the research plans of the Department of Health Policy Research Units and the commissioned research of the NIHR School for Social Care Research. London: Department of Health, 21 February 2013

Payment-for-performance: incentivising quality in public services. PIRU day workshop. London: Senate House, 20 February 2013

Payment-for-performance: incentivising quality in public services. PIRU evening symposium. London: LSHTM, 19 February 2013

<http://www.piru.ac.uk/?previous-event=9>

<http://www.piru.ac.uk/events/payment-for-performance.html>

Oral and poster presentations

Health econometric evaluation of the effects of a continuous treatment: a machine learning approach. Kreif N, Grieve R, Diaz I, Harrison D. Paper presented to European Workshop in Health Economics and Econometrics, Munich, September 2014

Direct payments in residential care evaluation. Lorraine Williams and Daniel Lombard. Presentation at Direct Payments Trailblazer Steering Group Meeting, North Lincs, 6 August 2014

Direct payments in residential care evaluation. Stefanie Ettelt and Lorraine Williams. Presentation at Direct Payments Trailblazer Group Meeting, Gateshead, 29 July 2014

Direct payments in residential care trailblazer evaluation. Raphael Wittenberg and Stefanie Ettelt. Presentation at Direct Payment in Residential Care Trailblazer Steering Committee Meeting, London 22 July 2014

Direct payments in residential care evaluation. Stefanie Ettelt and Lorraine Williams. Presentation at Nottinghamshire County Council Core Stakeholders Meeting, Nottingham, 8 July 2014

Evaluation – making it timely, useful, independent and rigorous. Nicholas Mays. Presentation to one-day PIRU conference on evaluation in association with the National School for Public Health Research and the Public Health Research Consortium, LSHTM, 4 July 2014

What is context, and when and why does it matter for evaluation? Mark Petticrew. Presentation to one-day PIRU conference on evaluation in association with the National School for Public Health Research and the Public Health Research Consortium, LSHTM, 4 July 2014

The GP Choice Pilot: evaluation of a pilot removing geographic boundaries for general practice services in the English National Health Service. Michael Wright et al. Presentation at 19th WONCA Europe 2014, Lisbon, 2-5 July 2014

Can health services research and evaluation become more relevant and useful? Favoured solutions from the UK and uncomfortable realities. Nicholas Mays. Keynote presentation to 1st BioMed Central international conference on Health services research: evidence-based practice. London: King's College, 1-3 July 2014

Patient experiences of the pilot to remove geographic boundaries in general practice: mixed method evaluation. Stefanie Tan et al. Poster presentation at HSRN annual symposium, Nottingham, 19-20 June 2014

A mixed-methods evaluation of a pilot to remove geographic boundaries in general practice in the English NHS. Stefanie Tan et al. Presentation to Canadian Public Health Association Conference, Toronto, 26-29 May 2014

Direct payments in residential care trailblazers' evaluation. Raphael Wittenberg. Presentation to Direct Payments Trailblazers' Evaluation Advisory Group Meeting, London, 20 May 2014

Making research and evaluation more relevant and useful in the real world: favoured solutions and uncomfortable realities. Nicholas Mays. Presentation to Clinical Academic Trainees, Severn Postgraduate Medical Education. Bristol: Engineers' House, 8 May 2014

Policy piloting as policy learning: the elusive objective. Stefanie Ettelt, Nicholas Mays and Pauline Allen. Presentation to UK Evaluation Society Annual Evaluation Conference. London: Senate House, 10 April 2014

The politics and practice of policy piloting. Stefanie Ettelt, Nicholas Mays and Pauline Allen. Presentation to LSE Social Services Research Group, Annual Workshop. London: LSE, 27 March 2014

Policy interventions to address major public health challenges – international experiences of alcohol labelling. Eleanor Winpenny et al. Presentation to DH analysts' seminar. London: Wellington House, Department of Health, 25 March 2014

Evaluation of the choice of GP practice pilot, 2012/13. Nicholas Mays. Presentation to Public Policy Exchange conference, 'Fit for Purpose: Shaping the Future of General Practice Services', London, 25 March 2014

Evaluation of the general practice choice pilot. Nicholas Mays, Mylene Lagarde, Stefanie Tan, et al. Presentation to DH analysts' seminar. London: Wellington House, Department of Health, 4 February 2014

Evaluation of the general practice choice pilot. Nicholas Mays. Presentation to the annual Department of Health Policy Research Unit Directors' meeting. London: Richmond House, Department of Health, 30 January 2014

Direct Payments in Residential Care Pilots – planning the full evaluation. Raphael Wittenberg and Stefanie Ettelt. Presentation at Direct Payments in Residential Care Trailblazer Meeting, Nottingham, 21 January 2014

Evaluating pay-for-performance programmes in health care: a comparison of synthetic control and difference-in-differences approaches. Noemi Krief and Richard Grieve. Presentation to DH analysts' seminar. London: Wellington House, Department of Health, 11 December 2013

Policy experiments: is there a trade-off between rigour and relevance? Three case studies in health and social care. Stefanie Ettelt, Nicholas Mays and Pauline Allen. Workshop presentation at Social Research Association (SRA) Annual Conference 2013, "Getting Social Research into Policy and Practice", London: British Library, 9 December 2013

Making research and evaluation more relevant and useful in the real world: favoured solutions and uncomfortable realities. Nicholas Mays. Keynote presentation to 8th HSRAANZ Health Services and Policy Research Conference, Wellington NZ, 2-4 December 2013

Evaluation of the National Cold Weather Plan for England. Shakoor Hajat et al. Presentation to 'Public Health Science: A national conference dedicated to new research in public health', organised by London School of Hygiene & Tropical Medicine, National Heart Forum and The Lancet, London, 29 November 2013

The multiple purposes of policy pilots - three case studies from health and social care in England. Stefanie Ettelt, Nicholas Mays and Pauline Allen. Paper presented to 2nd World Congress of Administrative and Political Sciences. Brussels: Maison N.-D. Chat d'Oiseau, 25-27 November 2013

Direct Payments in Residential Care Pilots – Early findings from initial study and plans for a full evaluation. Raphael Wittenberg and Stefanie Ettelt. Presentation to Direct Payments in Residential Care Trailblazer Meeting, Norwich, 30 September 2013

The multiple purposes of policy pilots and why they matter. Stefanie Ettelt, Nicholas Mays and Pauline Allen. Paper presented to European Health Policy Group, autumn conference. London: King's Fund, 19-20 September 2013

Evaluation of health-related impacts of the National Cold Weather Plan for England. Shakoor Hajat et al. Presentation at Public Health England Annual Conference, Warwick, 10-11 September 2013

The multiple purposes of policy pilots and their consequences – an analysis of three examples from health and social care in England. Stefanie Ettelt, Nicholas Mays and Pauline Allen. Presentation to Health Policy & Politics Network, Oxford: Magdalen College, 2-3 September 2013

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The multiple purposes of policy pilots and why they matter – an analysis of three examples from health and social care in England. Stefanie Ettelt, Nicholas Mays, Pauline Allen. International Conference on Public Policy, Grenoble, 26-28 June 2013

Challenges of payment-for-performance in public services – implications for health care. Mylene Lagarde. Presentation to PIRU Advisory Board, LSHTM, 16 May 2013

Learning from the experience of evaluation of DH policy pilots. Stephanie Ettelt. Presentation to PIRU Advisory Board, LSHTM, 16 May 2013

Health care scenarios – exploring potential changes in health care in England over the next 20 years. James Barlow and Chris Evennett. Presentation to PIRU Advisory Board, LSHTM, 16 May 2013

Making research and evaluation more relevant and useful in the real world: favoured solutions and uncomfortable realities. Nicholas Mays. Seminar presentation at Centre for Paediatric Epidemiology and Biostatistics. London: Institute of Child Health, University College London, 24 April 2013

Challenges of payment-for-performance in public services - implications for health care. Mylene Lagarde and Nicholas Mays. Presentation to DH analysts' seminar. London: Wellington House, Department of Health, 23 April 2013
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Health policy piloting in England in the 2000s: has the drive towards 'evidence based policy' resolved long-standing dilemmas in relation to the purpose of piloting? Stefanie Ettelt & Nicholas Mays. History, Health & Policy Seminar. London: LSHTM, 10 April 2013

Evaluation of the direct payments in residential care pilots' programme: early scoping and feasibility study. Stefanie Ettelt, Raphael Wittenberg, Bob Erens, Martin Knapp and Nicholas Mays. Direct payments in residential care introductory workshop, Stevenage, 13 March 2013

Department of Health policy pilots: how the purpose of piloting matters for evaluation and learning. Stefanie Ettelt & Nicholas Mays. Presentation to DH analysts' seminar. London: Wellington House, Department of Health, 5 February 2013
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Choice of primary care provider: international experiences and implications for the English NHS choice policy. Celine Miani et al. Presentation at the Society of Academic Primary Care London and South East conference, Cambridge, 31 January 2013

Improving the value of policy evaluation. Nicholas Mays. Treasury Guest Lecture. Wellington NZ: The Treasury, 29 January 2013

Policy relevant research: who cares and what do they care about? Nicholas Mays. Presentation to Public Health Research Consortium meeting. London: LSHTM, 29 November 2012

The Public Health Responsibility Deal: how should such a complex public health policy be assessed? Mark Petticrew et al. Presentation at Public Health Science: A national conference dedicated to new research in public health. Royal Society of Medicine, London School of Hygiene & Tropical Medicine, National Heart Forum, The Lancet, 23 November 2012
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The Responsibility Deal: designing the evaluation of a complex policy. Mark Petticrew et al. Presentation to DH analysts' seminar. London: Wellington House, Department of Health, 13 November 2012
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The Responsibility Deal: scoping work and next steps in evaluation. Mark Petticrew et al. Presentation to Responsibility Deal Independent Evaluation Reference Group, 24 September 2012

What is the purpose of policy piloting? Three examples from health and social care policy in England. Stefanie Ettelt and Nicholas Mays. Presentation at conference, '40 years of Policy and Politics: critical reflections and strategies for the future'. Bristol: Marriott Hotel, 18-19 September 2012

The Responsibility Deal: phase 1 evaluation findings and next steps. Mark Petticrew et al. Presentation to Responsibility Deal Plenary Group. London: Department of Health, 4 July 2012

Improving the value of policy evaluation in health. Nicholas Mays. Seminar, Health Services Management Centre, University of Birmingham, 4 July 2012

The Responsibility Deal: phase 1 evaluation findings. Mark Petticrew et al. Presentation to Independent Evaluation of the Responsibility Deal, Reference Group. London: Department of Health, Wellington House, 31 May 2012

Evaluation of the general practice choice pilot. Nicholas Mays et al. Presentation to Department of Health General Practice Choice Workshop. London: MIC Conference Centre, 17 May 2012

Contribution and perspective of DH's Policy Research Unit in Policy Innovation Research on commissioning and doing policy evaluation. Nicholas Mays and Mark Petticrew. Presentation to DH analysts' seminar. Wellington House, Department of Health, 21 February 2012
<http://www.piru.ac.uk/?previous-event=4>

The Public Health Responsibility Deal: how might it be evaluated? A responsive PIRU project in progress. Mark Petticrew et al. Presentation to the Annual Meeting of DH Policy Research Unit Directors. London: Wellington House, 31 January 2012

Public Health Responsibility Deal: phase 1 evaluation. Mark Petticrew et al. Presentation to Independent Evaluation of the Responsibility Deal, Reference Group. London: Wellington House, 27 July 2011

How can evaluation contribute to health policy in England? Nicholas Mays. Presentation at PIRU launch event. London: Manson Theatre, London School of Hygiene & Tropical Medicine, 13 June 2011
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Policy evaluation in an age of 'evidence based' decision-making: what should it look like? Mark Petticrew. Presentation at PIRU launch event. London: Manson Theatre, London School of Hygiene & Tropical Medicine, 13 June 2011
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