HEALTH SERVICES RESEARCH & DEVELOPMENT STRATEGY

DISCUSSION PAPER
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CONTENTS:

Department of Public Health
Eastern Regional Health Authority

Health Services Research and Development Strategy

Discussion Paper

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Synopsis

Health Services Research means research into the delivery of health care and involves the investigation of the health needs of the population and the effectiveness and the efficiency of the provision of services to meet those needs. The more commonly used term is Health Services Research and Development (R&D).

Much of its work is applied and multi-disciplinary, requiring researchers not only with medical and paramedical backgrounds, but also with experience in social and behavioural sciences (sociology, anthropology, economics, geography, social psychology, etc), organisational and management science, statistics and epidemiology.

The increasing expense of delivering health care and the increased accountability of health care providers, has made it necessary to ensure that services provided are the most appropriate to meet the population's need and to guarantee that they are delivered in the least wasteful way possible. Creating a research-based healthcare system is an important way of creating a strong and efficient health sector.

A strategic approach should be adopted with suitable National and Regional Structures to ensure that the health services R&D function is as effective as possible.

At national level, a dedicated agency should be given responsibility for selection of research projects and funding of those projects. The Health Research Board is likely to be the most suitable location for this function. Funding for health services R&D should be earmarked to remove competition with biomedical research.

The Need

Healthcare systems have never before been subjected to the levels of accountability as they are today. There is a need for greater transparency in the operation of public health systems. Health expenditure in Ireland has risen markedly over the last 10 years. Despite this, Ireland has still among the highest rates of death for circulatory disease and cancer in the EU and only the UK and Denmark have higher levels of smoking-related death (Annual Report of the Chief Medical Officer, 1999).

More general developments in the wider healthcare environment are driving a need for greater accountability:

- increasing use of expensive health interventions and technology
- evidence based practice
- team based approach
- increasing profile of risk management
- demands of a more quality driven healthcare service
- increasing emphasis on performance management

In successive strategy documents, the Department of Health and Children has emphasised that policies must be objectively formulated, targeted and monitored.

The Scope

Any R&D function should be:

- patient centred
- based on social sciences research and qualitative methods and not just a narrow biomedical model of research
- multidisciplinary approach
- encompass Health Technology Assessment in its widest sense

The locus of the research function should be at the following levels:

- Regionally based research function at health board level for local issues/initiatives.
- Nationally based for those issues with national implications.
- Opportunity for international participation and sharing

The Issues

A national agency responsible for funding and monitoring this function would be desirable. The Department of Health and Children, the Health Research Board or another independent agency would be natural choices. Application, selection of health services research proposals, fund managing and monitoring would be the core functions of such an agency. A separation of monies for funding health services R&D and biomedical research would be welcome to remove direct competition between the two types of research. The project selection process should be clearly visible and fair.

The establishment of the R&D function at regional level should ideally be within an existing, suitable health board department with a functioning research capacity, a multi-disciplinary approach and experience of needs assessment and health services research . The Departments of Public Health are ideally placed, with appropriate expansion, to fulfil this role. Suitable staff, with a clear reporting relationship to the Director of Public Health and a co-ordinating Steering Group would be necessary supports to this function.

It will be necessary to ensure and foster a range of dependencies and linkages to guarantee effective discharge of the R&D function, given that the basis for research will be multi-disciplinary and multi-agency.

Certain basic, underlying principles should underlie the process for selection of research proposals:

- The selection process should be clearly visible and demonstrably fair
- The research should be of a high standard and capable of withstanding peer review
- The research should reflect recognised national and regional health priorities
- Research should, ideally be multi-disciplinary and multi-agency in nature

The research selection process should foster and encourage the further development of a health service R&D culture at regional and national level.

Dissemination of results in print, through conferences and online with a commitment to put best evidence into practice will greatly assist this process.

Introduction

Research can be defined as an organised and systematic way of finding answers to questions. Health Services Research means research into the delivery of health care.[1] Such a definition does not, however, reflect the scope and extent of the subject, and to determine just what health care research is trying to achieve, a more extensive description is required.

Various definitions exist for health services research exist,[1,2,3] particularly between different countries (see Appendix I). Taking the most relevant parts of other, recognised definitions, our understanding of health services research is ***"the investigation of the health needs of the population and the effectiveness and the efficiency of the provision of services to meet those needs, including access to, outcomes from, quality, delivery and cost of services".***

Health services research encompasses a variety of disciplines and approaches. Much of its work is applied and multidisciplinary. Given the broad nature of the study, this is necessary and desirable in order that a breadth of skills and competencies may be brought to bear on health service problems. The disciplines commonly required include social and behavioural sciences (sociology, anthropology, economics, geography, social psychology etc), organisational and management science, statistics and epidemiology. Health care researchers would include specialists in the above disciplines as well as health care practitioners and heath care managers.[2]

Reviewing previous definitions, Crombie and Davies conclude that health services research is concerned with addressing the following areas:[1]

- Provision of services
- Use of services
- Organisation of services
- Distribution of services
- Quality of services
- Planning of services
- Health needs of the population
- Effectiveness of care
- Efficiency of care
- Ease of access to services
- Equity of use of services
- Impact of services on health status, illness and disability
- Health technology assessment
- Use of medical knowledge
- Attitudes of the public and health professionals.

Based on the scope of the above areas of concern, the need for health services research is apparent. Health services are a precious, limited resource and as such must be used carefully. Wasted resources have more than one price. The opportunity cost has an impact on those areas that did not receive the resources in the first place. Moreover, given the need for increasingly demonstrable benefit from the interventions health care providers chose on behalf of their clients, visibly wasted or repeatedly ineffectual therapies are becoming unacceptable and damaging to credibility. With increased

accountability to local and central government, the media and the general public, providers are required to be increasingly careful in their choices. Against this background, health care systems around the world are concentrating more and more time and effort into deciding the most effective and efficient way of delivering services. With this has come the realisation of the need to shift focus towards outcomes rather than outputs and processes.

The more widely used term today is research and development (R&D). This is favoured because it more completely describes the process started by research. Development involves the conversion of the results of research into beneficial change. In those countries that are beginning to develop a strengthened R&D function, the approach adopted has been a strategic one. The drive has been to develop a strategy that is coherent with a national health strategy – R&D priorities chosen to match the priorities identified by national health strategies.[4] So central is the issue of financing of health services R&D in the UK that a separate strategy to secure funding has been launched. This strategy for funding of the new National Health Service (NHS), *Research and Development for a First Class Service,* has moved Research and Development centre-stage within the NHS.[5] This strategy acknowledges the role of UK Government in working to improve wealth, health and well being and the necessity for the provision of healthcare of increasing quality. Basic and strategic research must form the basis for development of new ways of health protection and promotion; care and cure and applied research form the basis for service development.[5] The UK Strategy has outlined the purposes of R&D funding (Table I).

Table 1 Purposes of R&D Funding

Identification of needs
Evaluation of R&D initiatives and interventions
Addressing R&D priorities and needs of the health service
Securing involvement of partners in R&D
Health service contribution to R&D infrastructure and environment
Making findings accessible
Encouraging exploitation
Evaluation of implementation

In the past, health service research has fared badly in comparison with mainstream biomedical research. Health services research has not been fully appreciated in the broader health research community and this has led to an undervaluing of the discipline.[1]

A Health Services Research and Development Strategy for Ireland

The Need

Evolving European legislation is directed towards increased transparency in the operation of public health systems. This is necessary to ensure that meaningful comparisons of performance may be made between and within member states. Enhanced accountability and transparency will demand maximal effectiveness and efficiency of services. Research will be continually required to test existing and new ways of doing things.

Over the last 10 years, health expenditure in Ireland has risen from £1.6BN in 1986 to £4.2BN for 2000.[6] There is now a requirement to demonstrate the benefits from health services. Ireland's rates of heart disease and stroke are falling, but we have still among the highest rates of death for circulatory disease and cancer in the EU and only the UK and Denmark have higher levels of smoking-related death.[7] In order to improving the health status of the Irish population, it will be necessary to differentiate between those services with benefit and those which do not or worse, those which harm.

Added to this are more general developments in the wider healthcare environment all demanding more effective use of resources:

- The rapidly increasing use of expensive health interventions and technology,
- The increasing awareness of the need for evidence based practice, management and policy making[8,9,10]
- The increasing need for a team based approach to patient management, health promotion and health protection,
- The increasing profile of risk management
- The demands of a more quality driven healthcare service
- The demands for a multidisciplinary approach to health protection and promotion
- The increasing emphasis on performance management and the emergence of governance
- The development of a National Health Information Strategy which will ensure standardised, timely information to inform policy making at every level.

In successive strategy documents, the Department of Health and Children has emphasised that policies must be objectively formulated, targeted and monitored. The transfer of focus from healthcare to health, as envisaged by the Government's Health Strategy document of 1994, "Shaping a Healthier Future", has made it necessary to be able to quantify the health needs of our population and to adjust service to satisfy those needs.[11] The Department's central aim, as indicated in its mission statement, is "to achieve measurable health and social gain and provide the optimum return on resources invested."

A strategic approach has been adopted in addressing the most serious diseases and conditions in this country with the Cancer Strategy, the Building Healthier Hearts Strategy and the evolving Accidental

Injuries Strategy. Implementing, monitoring and evaluating such long term initiatives will require a well developed routine health information monitoring system coupled with a strong R&D capacity to ensure that objectives are being met and that such initiatives are sustainable.

In the past, the investment in health services research has not been commensurate with the proportion of national income spent on healthcare. In order to deliver quality, effectiveness and efficiency, there has been a marked international move towards expansion of health services R&D activity. *"Creating a research-based healthcare system is an important way of creating a strong and efficient health sector".*[2]

In the past, health services research in Ireland has not been well placed to compete for international health services research involvement and funding. A strengthened health services R&D function has been identified as being necessary to increase Ireland's success in the bidding process.[2] The increasing size, complexity and expense of health services further underlines the need for research.[12] Amongst the bars to the establishment of a healthy research culture and function in Ireland has been the weakness in effective data and information systems.[2,12] The successful development of such systems as HIPE and the Public Health Information System (PHIS) exemplify how effectively even routinely collected data can be used to more satisfactorily inform policy making at every level. The Health Information Strategy will permit this capacity for using routine and research information to guide the development of health services development most effectively.

The Scope

In order to reflect the demands of public service, any R&D function should be patient centred. In order to reflect the extent of work engaged in by health services, such function should not be based on a narrow biomedical model of research but should include social sciences research and qualitative methods. This will require a multidisciplinary approach to research. The scope of such research should encompass Health Technology Assessment in its widest sense to include health and health services information, counselling and education.

The locus of the research function will be important – fundholder control must be balanced against the devolving of function locally to ensure maximal effectiveness as envisaged in the Strategic Management Initiative. A system along the following lines in likely to be most effective:

- Regionally based research function (at health board level) for local issues/initiatives. Such issues might include research into local access arrangements or research into local patterns of drug misuse.
- Nationally based (e.g. NICE in the UK) for those issues with national implications. This might include researching the effectiveness or otherwise of suggested national interventions such as screening programmes.

- Scope for international participation and sharing (e.g. Cochrane Collaboration, InterDEC, the International Society of Technology Assessment in Health Care). This might include research into the effectiveness of interventions with international applicability.

Setting priorities will be a necessary early step in the process – deciding which areas should be targeted for research. This can be best addressed by needs determination; review of the Annual Report of the CMO or any of the DsPH will indicate that heart disease and stroke, cancer, accidental injury, the elderly, those with special needs and children are likely to be high priorities.

The Issues

The issues which will be necessary to address will be concerned largely with the locus of the research and development function and with the structures required to discharge the R&D function.

The choice of agency to fund and monitor this process would be crucial. Given that it is a national initiative, a national body would be the most appropriate and effective option. The likely agencies would include the Department of Health and Children, the Health Research Board or some other independent agency.

As part of its work this agency could:

- Establish an application and selection process
- Determine which projects should be funded on the basis of merit,
- Manage and release funding for agreed projects and
- Monitor the appropriateness of the use of funds.

A decision to separate funding for health services R&D from that for biomedical research would be necessary. Earmarked funding would remove direct competition between these two research areas. This will have a major impact on the effectiveness of health services R&D; biomedically-based research which, while very attractive of funding, is less likely to increase significantly effectiveness in the delivery of health services.

The basis upon which research projects are selected must be clearly visible and fair. Research which is of a high standard and sufficiently robust to withstand peer review is that most likely to lead to improvements in health and in the way health services are managed. It is important that this funding would be ring-fenced at regional level.

Within the chosen agency, a vital requirement for the effective selection procedure would be a specific adjudication panel for health services R&D. All or a majority of panel members would have a health services research background, for example, epidemiology, management, economics and other social sciences, with representation from appropriate academic departments. It would be necessary to have

available as appropriate a group of international experts from a similar health services R&D background, to supplement and to arbitrate on behalf of, the health services adjudication panel.

The establishment of an R&D function at regional (health board) level must be on a needs basis. There should be strong emphasis on health needs and intervention impact assessments as drivers for prioritisation in choosing interventions.

The likely options for the locus of such a function are within an existing, suitable department or division or through the establishment of a new department or office. An appropriate option might be the establishment of an R&D function within existing health board Departments of Public Health. This option is likely to be the most effective as many of the requirements for establishing such a function will have already been met by the Departments of Public Health:

- There is already a culture of health services research
- There is experience of change management
- There are established multidisciplinary teams
- There is wide experience of needs assessment
- There is appreciation of the need for prioritisation
- There is an existing pool of research capability
- There is an environment and experience of teaching
- There is a keen recognition of the need to get research into practice
- There are well-established links with all parts of the health service: acute care, community care, primary care and special services, as well as with local authorities.

This would be the preferred option particularly as this unique mix of skills is not readily found elsewhere in the health service. The local R&D function would seek to promote an understanding of the role and importance of R&D and would work to promote awareness in staff and the highest standards in research. It would also seek to empower all staff to contribute to research with the support of the Departments of Public Health.

Structures

In order to ensure effective regional discharge of the research function, it would be necessary to ensure that the appropriate structures and reporting relationships were developed. Staff, dedicated to the R&D function, would work closely with or within the Departments of Public Health, and report directly to the DPH. The following staff (depending upon the size of the health board) might be seen as minimum requirements:

*1. **Research Co-ordinator:***

This post would be crucial to effective performance an R&D division. The chief role of this post would involve co-ordination and supervision of the research application process, education and training and broadcasting the role of research and its results. This role would be a managerial and not a pure research role. The key skills and functions of this post would include:

- Dedicated to R&D unit
- Excellent communication skills
- Central co-ordinating function
- Supervisor
- Fund manager
- Ability to compete for and draw down funding from a variety of sources, national, EU, other international
- Link in national/international projects
- Promotion of research ethos and fostering a research culture
- Supporting and providing appropriate training in research methods
- Funding tutor for staff

2. Research Officer:

This post would provide research expertise in support of the research co-ordinator. Post-holders would have a background in applied health services research. The key skills and functions of this post would include:

- Dedicated to R&D unit
- Excellent communication skills
- Support for co-ordinator
- Advisor for co-ordinator and other staff
- Available as a research resource
- Assisting in prioritisation of projects
- Training in research methods
- Promotion of research ethos and fostering a research culture

3. Clerical officer

The key attributes of this post would include:

- Dedicated to R&D unit
- Excellent communication skills

In order to guide the regional research function, a Local Steering Group should be established with the following suggested remit

- Prioritisation of local issues
- Research promotion
- Selection of projects (with the option of individual application to national agency)
- Liaison with other steering groups on national/international projects

Such a group should include the Director of Public Health, as chair, the research co-ordinator and representatives of acute hospital medicine, general practice, special hospital services, management, paramedical and nursing services and information and communications technology services.

In addition to promoting a research ethos and fostering a research culture, adequate training of staff will be a vital factor in the success of any R&D initiative. An approach following internationally accepted best practice in terms of research methods and ability to identify and secure funding will ensure high and equal standards throughout the country. The development and adoption of standardised guidelines and protocols will ensure uniformity.

To be successful, it will be necessary to provide the opportunity for all staff to be empowered to contribute to the research process with the support of the Departments of Public Health where appropriate. Equally, it would be necessary to recognise the importance of protected time for staff who become involved in research projects.

Dependencies and Linkages

It will be necessary to develop and foster the following dependencies and linkages to guarantee effective discharge of the R&D function, given that the basis for research will be multi-disciplinary and multi-agency.

1. ***Internal:*** These are the core dependencies and linkages that will determine the effectiveness of regional health services R&D capability. Strengthening these linkages for research purposes will improve relationships in day-to-day matters. A close relationship should be fostered within the Department of Public Health between the existing departmental staff and research staff. Closer research links with clinical, community and paramedical colleagues will deepen these relationships. These dependencies and linkages would include:
    * Within public health
    * Health services management
    * Community care
    * Primary health care
    * Hospitals
    * Staff caring for those with special needs
2. ***External:*** These dependencies and linkages will be important in accessing funding and expertise and sharing of information. Of particular importance will be the relationships with funding agencies, with third-level academic institutions which will assist in building up research skills and competencies at regional level and with non-health agencies, such as local authorities, whose activities have important health implications. These dependencies and linkages would include:
    * Funding bodies (HRB, DOHC, EU 5th Framework, WHO)
    * Academic institutions (Universities, technical institutions)
    * Research institutes (The Wellcome Trust, RAND, etc)
    * Professional Organisations, RCPI, RCSI, Nursing bodies, Paramedical organisations, Irish Psychological Society, Irish Association of Social Workers etc)
    * Statutory agencies (DOHC, NDSC, FSAI, NCR)
    * Voluntary agencies (MRF, IHF, ICS)
    * Private sector (Pharmaceuticals, Technological)

* Other R&D agencies

There will be mutual benefits for these relationships in ensuring that research questions remain focussed on population health needs.

Process of Selection of Research Proposals

Certain basic, underlying principles should underlie the process for selection of research proposals:

- The selection process should be clearly visible and demonstrably fair
- The research should be of a high standard and capable of withstanding peer review
- The research should reflect recognised national and regional health priorities
- Research should, ideally be multi-disciplinary and multi-agency in nature
- The research selection process should foster and encourage the further development of a health service R&D culture at regional and national level.

Conclusions

Health services R&D are the way health services determine the best way to deliver health care. R&D are needed to inform the core health service functions of needs assessment and evaluation of effect. Given the expense of delivering health care and the increased accountability of health care providers, it has become necessary to ensure that services chosen are the most appropriate to meet the population's need and to guarantee that they are delivered in the most effective way possible.

Health services R&D are a method, which can assist in the measurement of the impact of services. For their development, a strategic approach will be necessary, with carefully considered structures and processes to foster and maintain research. Protected funding and wide latitude for regional decision making backed by a national agency will be necessary for the effective discharge of this research function.

To ensure the sustainability of the R&D function, there must be the capacity to disseminate findings via journals, conferences or online. A high level commitment to getting research findings into practice will ultimately decide the success or otherwise of this type of research.

Appendix I

Definitions

In the UK, the widely adopted definition by the Medical Research Council, of health services research is *"the investigation of the health needs of the community and the effectiveness and the efficiency of the provision of services to meet those needs".*[2]

In the United States, health services research is defined by the Academy for Health Services Research and Health Policy as *"a field of inquiry using quantitative or qualitative methodology to examine the impact of the organisation, financing and management of health care services on the access to, delivery, cost, outcomes and quality of services".*[3]

Glossary

Cochrane Collaboration	International organisation assisting healthcare decision-making using systematic reviews.
CMO	Chief Medical Officer at the Department of Health and Children
DOHC	Department of Health and Children
DPH	Director of Public Health
5th Framework Programme	The EU's strategic research and development programme
FSAI	Food Safety Authority of Ireland
HRB	Health Research Board
ICS	Irish Cancer Society
IHF	Irish Heart Foundation
MRF	Meningitis Research Foundation
NCR	National Cancer Registry
NDSC	National Disease Surveillance Centre
NICE	National Institute for Clinical Excellence – provides best evidence within the NHS
R&D	Research and Development
RAND	US-based voluntary agency which uses research and analysis to improve policy and decision making.
RCPI	Royal College of Physicians of Ireland
RCSI	Royal College of Surgeons in Ireland
SMI	Strategic Management Initiative
Wellcome Trust	The world's largest medical research charity
WHO	World Health Organisation

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