The Identification of Research Priorities for Therapy Professions in Ireland

Main Report

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1.1 General Introduction to the Study

The therapy professions (which include Chiropody/Podiatry, Dietetics, Occupational Therapy, Orthoptics, Physiotherapy and Speech and Language Therapy) constitute a large and growing proportion of the Irish healthcare workforce. They play a very significant role in the provision of healthcare. The shift in emphasis from treatment interventions that focus on cure to those that focus on quality of life outcomes and new ways to deliver services has strengthened the role of the these professions. They are aware of the need to ensure that the best available evidence is generated, tested and applied for the effective and efficient delivery of services. The requirement for a research culture in the Irish health service has been highlighted in many Irish policy documents (see below). However, in a climate of limited resources it is recognised that research in the therapy professions should concentrate on those areas of most relevance to the health care needs of the Irish population.

The aim of this study is to identify research priorities for each of the six Irish therapy professions through gaining consensus on these priorities from the professionals themselves as well as from key stakeholders and service users. The key stakeholders were senior health service managers and policy makers while the service users were patients who have had experience of being cared for or treated by therapy professionals. The approach used to gain consensus was the Delphi methodology. This project took place over a 12 month period and was managed by a nine member team of experienced researchers. A Research Steering Group constituted by the Health Research Board met with the project team on four occasions over the course of the study. In addition, a Research Advisory Group composed of representatives of the therapy professions met with the team on two occasions.

The remainder of this chapter provides an overview of relevant national and international policy and strategic documents. This sets the context and direction for the identification of research priorities for the therapy professions. A review of previous research priority studies of relevance to these professions can be found in Chapter 2. The Delphi methodology is described in Chapter 3. In Chapter 4 the findings and discussion are presented for each of the six therapy professions and then cross referenced to what the stakeholder and service user identified as research priorities for these professions. This is supplemented by a separate results section and discussion for the service users and the stakeholders. The overall discussion and recommendations are presented in Chapter 5.

1.2 Introduction to Health Policy in Ireland

In step with other western countries, health care provision in Ireland has in recent years been underpinned by several government strategies. Beginning with *'Quality and Fairness: A Health System For You' (DoHC 2001a; 2006a); Primary Care: A New Direction (DoHC 2001b; Making Knowledge Work for Health: A Strategy for Health Research (DoHC 2001c) and Towards Better Health: Achieving a step change in health research in Ireland (Forfás / DoHC 2006)*.

Significant recent health strategies will now be highlighted in terms of two key objectives: to identify priority areas as indicated in the strategies, and to identify their implications for research and development in the therapy professions.

1.2.1 Health Research Strategy

An important development from the *Making Knowledge Work for Health* exercise (2006) was an investment in health-related science and technology that culminated in the Advisory Council for Science, Technology and Innovation's (Forfás / DoHC 2006) strategy for health research.

Towards Better Health: Achieving a step change in health research in Ireland, Advisory Council for Science, Technology and Innovation (Forfás / DoHC 2006)

The importance of health research to the broader national social and economic agenda was acknowledged in strategies such as *Making Knowledge Work For Health.* However, the ACSTI strategy identified ways in which health research could become a core element of the health care system. This underpinned its strategic role in improving both the health of the nation and Republic of Ireland's ability to compete internationally in this arena. In this document health research is interpreted as covering a broad spectrum from basic scientific knowledge generation through to translational research and population health. It is also accepted that health is impacted on by wider systems such as the environment and lifestyle. The therapy professions are closely engaged with many of the health care processes and systems from health technologies to healthy environments and from medication awareness to lifestyle change.

The vision set out by the Advisory Council for Science, Technology and Innovation is to drive a step change in the level and quality of health related research and innovation. A key element of this vision is to equip clinicians with the knowledge, experience and environment to deliver the best possible health care, based on the latest therapeutic and technological developments. The Advisory Council considered that the most effective means of ensuring that the health service is responsive to and is applying the latest developments in health care, management and practice, is to involve the whole health system in research. In order for this to happen there is a need to increase the number of highly trained researchers and technicians working within the health service and link them to centres of academic and industrial excellence.

The Advisory Council completed a rigorous review and consultation process. They looked carefully at the Irish system in its current form and compared this to international health services in which research is more embedded, and they explored how this was achieved. In summary, they identified a number of issues that needed to be resolved and suggested a series of developments that needed to be implemented in order for Ireland to be able to optimise the benefits of research in healthcare:

- Develop an integrated and coherent policy on health research;
- Seek support of government, educational systems, research bodies, hospitals and departments, health professions and key stakeholders;
- Set up an inter-departmental Health Research Group to adopt a coherent approach to the identification of research priorities;
- Develop a system of integrated governance, combining academic and clinical expertise and engagement and facilitating 'protected time for research';
- Establish a diverse funding system inclusive of a number of agencies: Strategy for Science, Technology and Innovation; Science Foundation Ireland; Health Research Board; Higher Education Authority and Enterprise Ireland;
- Re-shape educational practices for health professions, involving more exposure to research methods and applications and provide postgraduate training tracks for academic clinicians;
- Expand the mechanisms to translate research into practice and products.

The underlying philosophy supporting these proposed changes was that quality research policy and structures would lead to quality research outcomes that would enhance health care.

1.2.2 Implementation and Quality

A number of key themes in Irish healthcare, including research and evaluation, have more recently been addressed in a commissioned report on patient safety and quality assurance (DoHC 2008a).

Department of Health and Children: The Report of the Commission on Patient Safety and Quality Assurance (DoHC 2008a)

This report made important recommendations for safety and quality in health care in Ireland. Central to these is the establishment of nationally agreed standards along with the identification of resource requirements. The commission went on to specify the following priority areas:

- Leadership training for clinicians and managers;
- Licensing procedures for professions;
- Audit and evaluation processes that address clinical outcomes;
- Patient advocacy and the involvement of service users, carers and support staff in service development and evaluation;
- Practical support for the application of evidence based practice in everyday work;
- Effective governance and integration across professional and administrative bodies.

1.2.3 Future Planning

As with international health care, evidence-based practice and outcomes research are priorities in the Irish policy literature. Three further policy documents are important in this regard. The first is a Policy Framework from the Department of Health and Children aimed at tackling chronic disease. The other two are strategic documents from the Health Service Executive.

Tackling Chronic Disease: A Policy Framework for the Management of Chronic Diseases (DoHC 2008b)

This policy document focused on both the prevention and management of chronic diseases and their effects and sets them within the relevant demographic trends. It outlines a framework for action over the next two decades. An ageing population, coupled with the lifestyle diseases of contemporary societies (e.g. hypertension, diabetes, heart disease), means that modern health care systems need to adopt a two-pronged approach. While people need treatment and care for existing conditions, a greater emphasis should be placed on the prevention of disease and on the promotion of good health and wellness. Furthermore, as the Minister for Health and Children, Mary Harney TD stated in her introduction to the document:

"These conditions affect general wellbeing and quality of life; account for most of the health care resources used, and will represent a significant economic burden for Ireland in the future. There is much which can be done because most of the chronic disease burden is caused by risk factors which can be prevented" (DoHC, 2008c, p.5).

A major emphasis is placed on the primary care preventative – early intervention setting. Again this echoes the international policy literature. It is suggested that a number of measures be undertaken, broadly located under the following two main aims:

- Promote health for the general population, thereby reducing risk factors associated with chronic disease;
- Promote structured care systems that are integrated across sectors and disciplines to provide optimum outcomes and quality of life.

An evidence base for practice, ongoing evaluation and routine audits are also highlighted within the strategy's recommendations.

As part of the larger health care team, therapy professions have a key role to play in the care and treatment of people with chronic diseases as well as having a strong focus on health promotion and disease prevention. In this context it is clear that effective and efficient practises depend upon a multi-disciplinary based integrated health service. Significantly, the Health Service Executive has recently published two strategic plans.

The Health Service Executive, Corporate Plan 2008-2011 (HSE, 2008)

The Health Service Executive (HSE) was established in January 2005 with a remit to deliver health and social care and to promote the health and wellbeing of the population. The HSE delivers its corporate plan through three main conduits: Primary, Community and Continuing Care (PCCC); Hospitals and Acute Services; and Population Health. In addition, it places an emphasis on seamless transition across services and a move towards integrated delivery where possible (HSE 2008). Contemporary health care policy attempts to strike a balance between acute in-patient care, day care and community care. Greater "*local responsibility and authority within defined national parameters*" is at the forefront of the HSE's work. This addresses the constant dynamic that operates between individual and local perspectives and the pragmatic and administrative realities of providing health care at a national level.

The Corporate Plan gives direction to these responsibilities and the 2008 plan is the second such document since the HSE's inception. Linked with the Transformation Programme (HSE 2007), through which the HSE is actively re-structuring to meet the needs of a changing society, the Corporate Plan sets out a number of key outcomes and key performance indicators. Research and evaluation are just some of the essential processes involved in putting the Plan into action and some of the main foci are:

- An integrated health and social model, with special emphasis on accessibility;
- Improved patient outcomes (with research and evaluation implications);
- Most effective use of resources;
- Meeting key health challenges (chronic disease, mental health, disability, ageing, cancer);
- Health Promotion and Health Protection for the population.

Monitoring systems are built into the HSE structure. The Population Health Dataset, along with the Healthstat system provides ongoing information about service usage, access and integration. There is significant emphasis on the need to set targets, monitor and measure in order to improve.

The Corporate Plan sets out the broad direction and structure for health and social care over a number of years to come. However, it is the annual National Service Plan that further operationalises those objectives, translating them into direct action at Directorate level and into best clinical and community practice.

The Health Service Executive, National Service Plan 2009 (HSE, 2009)

This year's National Service Plan also reflects the stated values that underpin the Corporate Plan and Transformation Programme, including fairness and equity, the pursuit of excellence and the development of leadership at all levels within the HSE. In a foreword Professor Brendan Drumm noted that a welcome addition in funds will make possible further innovations in caring for older people, suicide prevention and therapy supports for school going children.

Cost effectiveness is emphasised in the National Plan, as well as in the Corporate Plan. Another strong theme is community care, valued as beneficial to the population. Community care is also seen to present a more cost-effective option than hospital care and will help to '*reduce the over-reliance on high cost acute hospitals and provide more integrated community based care'* (HSE, 2009).

The relationship between research, practice, and policy is indicated clearly in both the Corporate and National Plans. Research and evaluation are seen to be cornerstones to the effective improvement and monitoring of services within the HSE and to the education, training and development of the professions that deliver them. Furthermore, the Plans set out detailed areas for attention in the shape of community care objectives and priorities. These form important topics for research: Children and Families; Mental Health; Disability Services; Older People; Palliative Care; Social Inclusion; Acute Services and Pre-Hospital Emergency Care; National Cancer Control Programme; and An Integrated Health and Social Care Model. These topics again resonate with common themes in the international policy and health research literature.

1.2.4 Primary Care

Table 1 shows the extent to which primary care has become a focus of recent initiatives to reform health service delivery in Ireland. A primary care based service proposes a shift to re-balance hospital focused services with primary care services. The direction is towards the creation of multidisciplinary teams and networks located in the community where they are the first point of contact. This emphasis on multidisciplinary working is seen as key to the effective operation of primary care teams and networks incorporating general practitioners, community nurses and the therapy professions. A high quality health system also includes such features as:

- clear definitions of health and care;
- 'there when you need it';
- accessibility;
- ongoing evaluation and development.

Table 1: National and International Health Strategy Documents: Primary Care

PRIMARY CARE DOCUMENT	**SOURCE (Country / Organisation)**	**THEMES AND RECOMMENDATIONS**
Primary Care: A New Direction	**IRELAND** DEPARTMENT OF HEALTH AND CHILDREN [DoHC 2001b]	· Re-set balance between hospital care and primary care networks and teams; · Aim for first point of contact in community base; · Multidisciplinary teams to include GPs, community nurses and therapy professions; · Physical and mental health promotion; · Health Action Zones; · Quality agenda; · Education, training and research links.
Primary Care: Research and Development in Ireland: The Mant Report	**IRELAND** HEALTH RESEARCH BOARD [PROFESSOR DAVID MANT] [HRB 2006]	· How to expand evidence based practice in primary care; · AHP section, role and research within speech and language therapy, occupational therapy and physiotherapy; · Strengthen the research agenda for primary care; · Expanded remit beyond GP practices alone, incorporating wider health professions; · Ring-fenced research fellowships; · Clinical career pathways to include research; · Reflected findings of Finch Reports UK [UKCRC, 2007; 2008].
International		
Primary Health Care: Now More Than Ever. World Health Report 2008	**WHO** WORLD HEALTH ORGANISATION [WHO 2008]	· Aims: health system more equitable, inclusive and fair; · Integration of services; · A cross-sectoral approach; · Acknowledge and develop role of Allied Health Professionals in primary care.

Much has been achieved with regard to the engagement of the therapy professions in primary care. This includes:

- The therapy professions are aligned in their commitment to community based provision of care;
- Education and training institutions have adapted their therapy profession curricula accordingly;
- There has been more research activity by therapists into community based services;
- The status of community based therapists has been elevated within the service;
- There has been realignment of the different therapy professions to facilitate a coordinated approach through team development;
- Management IT systems have been developed within primary and community care;
- More 'first point of contact' care is being provided in the community and the reliance on secondary healthcare for this has reduced.

Many of these trends were alluded to the in reports highlighted in Table 1. In terms of research, the Health Research Board commissioned Professor David Mant to explore the potentials for further development of Primary Care research and development in Republic of Ireland. It was published in 2006 (HRB, 2006) almost a decade after he produced a similar report for primary care research in the United Kingdom (Mant, 1997).

The Mant Report: Primary Care: Research and Development in Ireland (2006) Health Research Board (HRB 2006)

This report sought to expand the research base for primary care in Ireland. Section A1.8 examined the situation within speech and language therapy, occupational therapy and physiotherapy.

While primary care had traditionally been centred on GP practices, it had in recent years included "*an increasing range of other health professionals*" (p.36-37) with a significant input from therapists. Research in these disciplines was found to be at a '*quite low level'*, even though therapy training was found to be extensive.

With reference to capacity and capability, Mant called for an expansion of research and development in the therapy professions. He felt that this was necessary in order to enhance the evidence base and for the continued practise and professional development of these disciplines.

Clinical Academic Careers

Mant noted positive developments such as the new ring-fenced HRB Research Training Fellowship programme and how this will impact positively on future research capacity. One point of concern was an apparent lack of 'clinical academic career pathways' where clinical specialist grades did not necessarily have research experience (p.36-37). This reflects the focus of the recent Finch Report recommendations for Nursing in England (UKCRC, 2007), *Developing the Best Research Professionals.* Its main recommendations centred on the enhancement of clinical-academic research career pathways, the provision of funding and research training opportunities for clinical staff and the setting up of Masters of Research, Masters of Clinical Research programmes and PhD and Post Doctoral training for clinicians.

The recommendations of the Finch report were presented to a wider group of stakeholders (UKCRC, 2007). The Allied Health Professions (AHPs) were among the groups consulted and the majority agreed that similar strategies would be helpful for them and in the extension of their research

capacity. While they agreed that the original Finch recommendations applied to Allied Health Professions, further work would be required to streamline the recommendations for different therapy professions. The three main themes highlighted were career structure, limited research opportunities and skills development, and the need for supportive and flexible careers.

In Ireland, a significant development in increasing the research capacity and capability was the launch of a dedicated research strategy for the therapy professions in December 2008 (DoHC, 2008).

Therapy Professions' Research Strategy (DoHC 2008c)

The need to identify research priorities for the therapy professions was identified in *Therapy Research - Delivering Best Health: A Research Strategy for the Therapy Professions in Ireland 2008-2013.* This is well summarised in the following statement:

Pursuit of a sustainable and responsive research agenda will ultimately contribute to effective patient care and the health of Irish society.

Strategic Goal 3 of the Therapy Research Strategy is to '*Ensure a clear direction for research activities through agreed therapy research priorities*' (DoHC, 2008a). This goal is of particular importance considering the aim of the present study.

1.3 Health Policy in Context: Main Themes and Implications for Research

From the broad social and health policy and health promotion literature (Cleary & Treacy 1997; Jones & Sidell 1997; Green & Thorogood 1998; Hann 2000; Means *et al.* 2003; Hyde *et al.* 2004; Ham 2004), it can be detected that primary or integrated care and health promotion are the dominant themes in global health care in recent decades. This resonates with a foreword to the 2008 World Health Report by the WHO's Director General Dr Margaret Chan. Reflecting on the Report's title 'Primary Health Care: Now More Than Ever' she asserted that this:

"*…displays a growing appetite among policy-makers for knowledge related to how health systems can become more equitable, inclusive and fair. It also reflects, more fundamentally, a shift towards the need for more comprehensive thinking about the performance of the health system as a whole….(including)….public policy reforms that secure healthier communities, by integrating public health actions with primary care, by pursuing healthy public policies across sectors and by strengthening national and transnational public health interventions*" (WHO 2008).

In harmony with this international drive, primary care, service integration, equality and fairness and a wellness model have been central to health strategies in Ireland since at least 2001. This new health culture takes the view that health expenditure is an investment in society and recognises that wider socio-economic contexts (local, national, regional and global), along with lifestyle choices, help to determine the health and wellbeing of the nation. A similar perspective is evident in UK health policy. Means *et al.* (2003) analysed developments in community care policy and practice in Britain, stressing the importance of inter-sectoral collaboration and service integration.

In Ireland, a re-organisation of the health service has recently taken place. The Health Act, (DoHc, 2007) established the Health Information and Quality Authority (HIQA). Its remit includes the dynamic implementation of standards, accreditation for practice, problem solving, health screening, vaccination programmes and evidence based practice initiatives. While health care is delivered

through the Health Service Executive (HSE), it is bolstered by the research and dissemination remit of the Health Research Board (HRB). The HIQA, HSE and HRB recognise that research at the systemic level, as well as among health care professions is crucial if healthcare is to be informed by evidence based policy and practice.

1.4 Health Policy, Social Policy and the Concept of Health Impact

Health policy can be analysed on a number of levels and through a range of contexts. One view is to look at health policy within a wider frame of social and public policy and to remain aware of the multiple social and cultural factors that shape health status. As Green and Thorogood (1998) pointed out, policies that impact on health *"are not just those that concern the organisation of the health services, but also policies relating to transport, leisure, employment..".* In fact, any number of factors could be added to that list: housing, food availability, eating habits, family and interpersonal dynamics (p.9-11). Contemporaneously, Saltzman and Figueras (1998) analysed health systems in fifty-one European countries. They stated that "health services have only a limited impact on the health status of a population; rather, key determinants of health lie outside the health sector..in areas such as education, housing, employment and agriculture" (p.89).

In the health sociology and social policy literature this approach is termed health impact analysis. It is referred to here in order to re-iterate the broad context within which the more specific health-focused policies are constructed. Many national and international health strategies and policies take account of these psycho-social, political and economic variables. Indeed, Irish health policy makers have taken cognisance of health being within a wider social matrix in the construction of their Health Research Strategy Group. The group is drawn from a range of Government of Ireland departments including enterprise, trade and employment; agriculture; education; and transport. As noted in the Health Service Executive's most recent Corporate Plan (HSE 2008) and on the Health Research Board website (HRB 2009), the Health Research Strategy Group was set up in May 2007 with a remit to co-ordinate national policy and health research through a cross-departmental and cross-agency approach. The identification of strategic health research priorities with timeframes is a key term of reference for this multidisciplinary and cross-agency group. However, for the purposes of this policy overview, the boundaries have been set at policies and strategies with a well defined health sector remit and with notable implications for future research and development.

1.5 The International Dimension

The international and national policy reports will be presented in the following tables: Table 2 shows the broad themes in the international health policy literature while Table 3 presents strategies that address specific illnesses and issues in contemporary health care. These tables highlight both broad and specific foci and the policy themes that emerge have implications for research in the therapy professions.

A number of distinct and recurring themes emerge from the international policy documents. These include:

- the transition of services from acute hospitals to community and home care;
- the importance of public education, health promotion and disease prevention;
- the need for ongoing research to inform and reform practice and health systems;
- the health impact of lifestyle habits and practices;

- the change from low tech to high tech care and treatment;
- the change from patient passivity to patients as partners;
- the health impact of socio-economic and cultural factors;
- the development and management of the health care workforce;
- the need for integrated and streamlined services;
- the funding and cost-effectiveness of health systems;
- the reduction of health and social inequalities;
- the improvement of access for all to appropriate health care.

While applicable across the widest possible range of health care professions, administrators and policy makers, each profession can draw pointers from these themes. In particular, the therapy professions play major roles in each. For example, health promotion and disease prevention in tandem with lifestyle approaches are well addressed by a number of therapy professions: physiotherapists and dieticians focus on activity and exercise and a healthy diet; occupational therapists are core professionals in preparing individuals for independence and employment, including an evidence based approach to mental health care. Others play a significant role in the management and reduction of specific conditions and complications such as podiatry services for people with diabetes, speech and language therapy for people with strokes and orthoptics for people with vision problems. Indeed, through their practices and policies, all the therapy professions address those areas that are strategically important for the health and wellbeing of populations such as: improving the care of people with long term conditions; emphasising prevention, health promotion and supporting self-care across the lifespan; moving more care outside of acute hospitals into the community and people's homes; caring and treating vulnerable populations; providing new ways of partnership working with other professionals, agencies, service users and carers; reducing inequalities in health; and practising in safer and more efficient and effectives ways. From the policy review, it is clear that the issues identified by Irish policy makers mirror the main strategic objectives for health and wellbeing internationally. The strategic and policy objectives in Table 2 also provide useful signposts for relevant future research topics for the therapy professions.

Table 2: National and International Health Strategy Documents: Broad Themes

BROAD HEALTH AND RESEARCH STRATEGIES DOCUMENT	**SOURCE (Country/Organisation)**	**THEMES AND RECOMMENDATIONS**
IRELAND		
Slán 2007: Survey of Lifestyle, Attitudes and Nutrition in Ireland	**IRELAND** DEPARTMENT OF HEALTH AND CHILDREN [DoHC 2008d]	• Self-rated health status; • Health service use; • Assessed levels of breast feeding, mental health, physical activity, eating habits, income, smoking and alcohol, injuries, social and community supports, body weight and blood pressure; • Focus on diet and activity; • Aim to stimulate and inform debate on identified lifestyle factors that impact on health.
	IRELAND	

BROAD HEALTH AND RESEARCH STRATEGIES DOCUMENT	**SOURCE (Country/Organisation)**	**THEMES AND RECOMMENDATIONS**
Quality and Fairness: A Health System For You [and Progress Report]	DEPARTMENT OF HEALTH AND CHILDREN [DoHC 2001a and 2006a]	• Reflects culture of health promotion and a wellness model; • Health expenditure is an investment in society; • Wider socio-economic contexts (local, national, regional and global), along with lifestyle choices; • By 2006, progression reduced inequalities and improved access.
Making Knowledge Work for Health: A Strategy for Health Research	**IRELAND** DEPARTMENT OF HEALTH AND CHILDREN, HEALTH RESEARCH BOARD, [DoHC 2001c]	• Increase research capacity and skills of professions through third level education and in clinical settings; • Increased collaboration between education and clinical sectors; • Cross-departmental policy development; • Key tasks focused on: infrastructure; dialogue; funding decisions.
Towards Better Health: Achieving a step change in health research in Ireland,	**IRELAND** ADVISORY COUNCIL FOR SCIENCE, TECHNOLOGY AND INNOVATION [FORFÁS / DoHC 2006]	• Research spectrum from basic science to clinical outcomes and population health; • Recognition of health impact of environment, technology, lifestyle; • Integrated health research policy and governance; • Inter-departmental Health Research Group.
Therapy Research - Delivering Best Health: A Research Strategy for the Therapy Professions in Ireland 2008-2013	**IRELAND** DEPARTMENT OF HEALTH AND CHILDREN, THERAPY ADVISORY UNIT [DoHC Dec 2008d]	<u>Strategic Goal 3</u> • 'Ensure a clear direction for research activities through agreed therapy research priorities' [DoHC 2008c: 20].
The Report of the Commission on Patient Safety and Quality Assurance	**IRELAND** DEPARTMENT OF HEALTH AND CHILDREN [DoHC 2008a]	• Quality relies on evaluation and research; • Addresses practical resourcing for implementation of evidence based practice; • Recommends integrated

BROAD HEALTH AND RESEARCH STRATEGIES DOCUMENT	**SOURCE (Country/Organisation)**	**THEMES AND RECOMMENDATIONS**
		governance.
The Health Service Executive, Corporate Plan 2008-2011	**IRELAND** HEALTH SERVICE EXECUTIVE [HSE 2008]	• Sets directions for health service development; • Integrated health and social model; • Enhanced patient outcomes; • Effective use of resources; • Face challenges: chronic disease, mental health, disability, ageing, cancer; • Focus on health promotion.
The Health Service Executive, National Service Plan 2009	**IRELAND** HEALTH SERVICE EXECUTIVE [HSE 2009]	• Brings corporate plan to coal face; • Cost-effectiveness of services; • Build on innovations: older people's health; suicide prevention; therapy support for school aged children; • Enhance community care; • Develop relationship between research and policy for effective improvement and monitoring • Preparation of professions.
Northern Ireland and rest of UK		
A Workforce Learning Strategy *For The Northern Ireland Health And Social Care Services* *2009-2014*	**NORTHERN IRELAND** NORTHERN IRELAND DEPARTMENT OF HEALTH, SOCIAL SERVICES AND PUBLIC SAFETY [DHSSPSNI 2009 April]	• Guidance for effective training of healthcare staff; • Based on consultation with staff and organisations; • Staff development impacts positively on client care; • Vocational, professional and managerial skills and knowledge focus; • PDPs (personal development plans) for lifelong learning; • Organisations commit to provision of opportunities for PDPs.

A Healthier Future: A Twenty Year Vision for Health and Wellbeing in Northern Ireland 2005-2025, Executive Summary	**NORTHERN IRELAND**
	NORTHERN IRELAND DEPARTMENT OF HEALTH, SOCIAL SERVICES AND PUBLIC SAFETY [DHSSPSNI 2004]
		• projections for development of DHSSPSNI;
		• Five main themes:
		  • investment for health
		  • community involvement

BROAD HEALTH AND RESEARCH STRATEGIES DOCUMENT	**SOURCE (Country/Organisation)**	**THEMES AND RECOMMENDATIONS**
		• combined services • teams that deliver • quality improvement.
Health Systems in Transition: The Northern Ireland Report	**NORTHERN IRELAND THROUGH WHO** WORLD HEALTH ORGANISATION [Jordan *et al*. 2006] on behalf of the European Observatory on Health Systems and Policies	• Information on country based health systems; • Aims to support policy makers and planners; • Highlights challenges and areas for development; • Takes account of political-economic contexts and resources.
Best Research for Best Health – A New National Health Research Strategy	**UK** UK DEPARTMENT OF HEALTH [DH 2006]	• To improve health and wealth through research; • Establish research excellence; • Custodians of public money; • Strengthen and streamline research governance; • Foster an inclusive and fair research culture.
Health is Global: Proposals for a UK Government-wide strategy	**UK** Donaldson and Banatvala [2007] LANCET (10): 857-861	• Harmonisation of domestic and global health concerns; • Nutrition-related health; • Mental health; • Chronic disease: cardiac; respiratory; stroke; cancer; diabetes; • Ten Priorities (see text).
The South East England Health Strategy: A strategy for improving health and well-being in the South East Region	**UK** DEPARTMENT OF HEALTH SOUTH EAST REGIONAL PUBLIC HEALTH GROUP [DH 2009a]	• Partnership across all administrative sectors; • Address inequalities and enhance quality of life; • Links with national and local initiatives; • Widest concept of health and well-being such as lifestyle behaviours, occupations and environments; • Children and young people; • Later life.
Europe		
White Paper: Together for	**EU** COMMISSION OF THE	• Cross-sectoral consultation

BROAD HEALTH AND RESEARCH STRATEGIES DOCUMENT	**SOURCE (Country/Organisation)**	**THEMES AND RECOMMENDATIONS**
Health: A Strategic Approach for the EU 2008-2013	EUROPEAN COMMUNITIES BRUSSELS [Oct 2007]	process; • Aim to deliver a new health strategy for Europe; • Key terms of reference include ageing societies, threats to health, technology, citizen empowerment, inequalities, evidence production; • 'Health is wealth'; • Focus on EU voice in global dimension
Enabling Good Health For All: A Reflection Process for a New EU Health Strategy	**EU** COMMISSIONER D. BYRNE, BRUSSELS, EUROPEAN COMMISSION [15 July 2004]	• Overall goal – longer, healthier lives for all citizens; • Recognised health inequalities and social exclusion; • Reflective process for an effective new health strategy.
Other International		
Policy and Practice: Knowledge for better health – a conceptual framework and foundation for health research systems	**WHO** BULLETIN OF THE WORLD HEALTH ORGANISATION [Pang et al 2003] 81(11): 815-820	• Research generates knowledge to improve health systems; • Practical approach to construction of HRSs (Health Research Systems).
Advancing the Nation's Health: A Guide to Public Health Research Needs, 2006-2015 (*Research Guide*)	**US** US CENTERS FOR DISEASE CONTROL AND PREVENTION, US DEPT. HEALTH AND HUMAN SERVICES [US DHHS CDCP Dec 2006]	• Health protection goals; • From local to national and global arenas; • Intervention, translation, dissemination as broad strands; • Quick guide table provides topics e.g. infectious diseases, vulnerable groups, lifespan, disability, health education, environment and global themes.
Statement on Addressing Healthcare Workforce Issues for the Future	**US** US DEPARTMENT OF HEALTH AND HUMAN SERVICES [US DHHS 2008]	• Health professions' education programmes; • Funding and investment at federal level.
Research Matters – A monthly publication listing current health research in the US	**US** US DEPARTMENT OF HEALTH AND HUMAN SERVICES, NATIONAL INSTITUTES OF HEALTH	• Updates on current research projects at National level; • Ongoing themes: diabetes; hypertension; immunity;

BROAD HEALTH AND RESEARCH STRATEGIES DOCUMENT	**SOURCE (Country/Organisation)**	**THEMES AND RECOMMENDATIONS**
	[US DHHS NIH, 2009a]	schizophrenia; alcohol; depression.
A Healthier Future for All Australians	**AUSTRALIA** AUSTRALIAN GOVERNMENT, NATIONAL HEALTH AND HOSPITALS REFORM COMMISSION [Department of Health and Ageing 2009a]	• Tackle access and equity issues; • Challenges for expenditure and investment; • Deal with fragmentation; • Prioritise aboriginal and island populations; mental illness; remote rural populations; • Dental health to be included; • Equality and integration.

Table 3 provides an overview of national and international strategies focused on specific conditions such as:

- chronic diseases such as arthritis;
- cancer;
- cardio-vascular / stroke;
- obesity;
- diabetes;
- mental health.

It is evident from each of these that the therapy professions have a key role to play is the delivery of these strategies in practice. However, to do so effectively and efficiently they need to generate best evidence for their practice.

Table 3: National and International Health Strategy Documents: Key Health Topics

KEY HEALTH TOPICS DOCUMENT	**SOURCE (Country/Organisation)**	**THEMES AND RECOMMENDATIONS**
CHRONIC DISEASE AND DISABILITY		
Tackling Chronic Disease: A Policy Framework for the Management of Chronic Diseases	**IRELAND** DEPARTMENT OF HEALTH AND CHILDREN [DoHC 2008b]	• Prevention: target lifestyle change; • Health education and promotion across sectors; • Effective access and care management to enhance quality of life; • Push towards primary care and early intervention / prevention.
A Strategy for Cancer Control in Ireland	**IRELAND** DEPARTMENT OF HEALTH AND CHILDREN, NATIONAL	• Mirrors international trends; • Health promotion/prevention;

KEY HEALTH TOPICS DOCUMENT	**SOURCE (Country/Organisation)**	**THEMES AND RECOMMENDATIONS**
	CANCER FORUM [DoHC 2006b]	• Address inequalities; • Areas for development: early diagnosis, adequate treatment, palliative and supportive care.
Chronic Diseases: The Power to Prevent, The Call to Control	**US** US DEPARTMENT OF HEALTH AND HUMAN SERVICES, CENTERS FOR DISEASE CONTROL AND PREVENTION [US DHHS CDCP 2009b]	• Prevention strategies; • Address risk behaviours: low activity; saturated fat intake; smoking; binge drinking; • Enhance chronic disease research; • Drive towards equity; • Focus on settings for health promotion: worksites; schools; communities; • Funding issues.
Arthritis Prevention, Control and Cure Act (Pending Legislation)	**US** US DEPARTMENT OF HEALTH AND HUMAN SERVICES, OFFICES FOR LEGISLATION [May 2009c]	• Seek backing for projects supported by National Institutes of Health; • Genomics in childhood arthritis; role of statins in lupus; clinical trials of interventions; • Drive to implement National Arthritis Action Programme.
Long Term Health Conditions	**UK** DEPARTMENT OF HEALTH [DH 2009b]	• Study to explore health attitudes of general public; • Focused on those with long term conditions: 2 out of 5 adults in England; • Of these, 4 out of 5 consulted a health professional within last six months; • Perceived self-responsibility for health emerged as a clear theme; • Identified vulnerable groups (non-white ethnicity and London residents); • Overall, people want more training and information on management of their health condition.
CANCER		
Cancer: Halting the Cancer Burden	**US** US DEPARTMENT OF HEALTH AND HUMAN SERVICES, CENTERS FOR DISEASE CONTROL AND	• Prevention: focus on high risk groups; • Research and evaluation is key • Build capacity through social partnerships;

KEY HEALTH TOPICS DOCUMENT	**SOURCE (Country/Organisation)**	**THEMES AND RECOMMENDATIONS**
	PREVENTION [US DHHS CDCP 2009d]	• Educate professions & public; • Breast screening and colo-rectal screening; • Develop cancer centres; • Role of IT in prevention and national registers.
Cancer Reform Strategy	**UK** DEPARTMENT OF HEALTH [DH 2007]	• Prevention and early detection; • Access and equity of treatment; • Living with cancer: support; • Increase knowledge and disseminate research; • Partnership with charities; • Workforce planning and training; • Funding issues.
CARDIO-VASCULAR/STROKE		
Building Healthier Hearts: Introduction to the Report of the Cardio-vascular Health Strategy Group	**IRELAND** DEPARTMENT OF HEALTH AND CHILDREN [DoHC 1999]	• Key recommendations: 58 health promotion points including increased tobacco tax; food and nutrition policy; support sports provision for all ages; across education and health sectors; • Primary care links between GPs and wider health professions; • Risk assessment and screening; smoking cessation support; • Secondary prevention: cardiac rehabilitation with trained co-ordinators; • Audit and evaluation.
Heart Disease and Stroke Prevention	**US** US DEPARTMENT OF HEALTH AND HUMAN SERVICES, CENTERS FOR DISEASE CONTROL AND PREVENTION [US DHHS CDCP 2009e]	• National leading killer; • Most conditions preventable; • Burden of health care expenditure, reduced quality of life and reduced productivity; • Vulnerable groups remain at risk (certain ethnic groups and lower socio-economic status); • Centre programmes: smoking, nutrition, activity, diabetes.
Coronary Heart Disease and Stroke Strategy for Scotland	**SCOTLAND** SCOTTISH EXECUTIVE DEPARTMENT OF HEALTH [2002]	• All boards to develop explicit prevention strategies; • Focus on high risk groups: people with hypertension and/or diabetes;

KEY HEALTH TOPICS DOCUMENT	**SOURCE (Country/Organisation)**	**THEMES AND RECOMMENDATIONS**
		• Managed Clinical Networks and workforce planning; • Integrated primary care and hospital systems; • Cardiac rehab programmes; • Radiology planning for stroke; • Information management and databases.
OBESITY		
Report of the Inter-sectoral Group on the Implementation of the Recommendations of the National Task Force on Obesity	**IRELAND** DEPARTMENT OF HEALTH AND CHILDREN [DoHC 2009]	• Inter-sectoral action; • Educational approaches; • Social and community-based initiatives; • Economic initiatives: healthy food affordability; • Environments that support healthy food choices and regular physical activity; • Education and motivation of parents; • Food sector: address marketing/advertising issues.
Obesity: Halting the Epidemic by Making Health Easier	**US** US DEPARTMENT OF HEALTH AND HUMAN SERVICES, CENTERS FOR DISEASE CONTROL AND PREVENTION [US DHHS CDCP 2009f]	• Rising epidemic: a third of adult US population; 16% of children obese; • Target environments and individual choice; • Schools, worksites, communities; • State programmes: leadership, education and training; surveillance; • Organisation partnerships to promote physical activity and healthy eating.
DIABETES		
Diabetes: Successes and Opportunities for population-based prevention and control	**US** US DEPARTMENT OF HEALTH AND HUMAN SERVICES, CENTERS FOR DISEASE CONTROL AND PREVENTION [US DHHS CDCP 2009g]	• Reviewed recent studies on primary prevention of onset; • Lifestyle changes paramount: reduce body fat; increase physical activity; • For sufferers: improve blood glucose control; reduce risk of complications through; • Monitoring and education; • Application of research.
Five Years On: delivering the diabetes national	**UK** DEPARTMENT OF HEALTH [DH 2009c]	• National standards for care of people with diabetes;

KEY HEALTH TOPICS **DOCUMENT**	**SOURCE** **(Country/Organisation)**	**THEMES AND RECOMMENDATIONS**
service framework		• 'Putting Prevention First'; • Develop and train specialist workforce; • Early identification and education for self-management; • Structured education programmes e.g. Xpert; • Adapted for specific communities e.g. Asian; • Care planning to include self-care and prevention / management of complications.
MENTAL HEALTH		
A Vision for Change: Report of the Expert Group on Mental Health Policy	**IRELAND** DEPARTMENT OF HEALTH AND CHILDREN [DoHC 2006c]	• Recommends links between primary care, specialist teams and voluntary organisations; • Mental health promotion across all age groups; • Framework for building positive community mental health; • Accessible community based services; • Holistic view of mental illness; • Integrated multidisciplinary approach; • Person-centred treatment; • Involve service users and carers in planning; • Specialised community mental health teams providing home based assertive community outreach; • Multi-professional manpower planning.
National Mental Health Policy 2008	**AUSTRALIA** AUSTRALIAN GOVERNMENT DEPARTMENT OF HEALTH AND AGEING [2009b]	• Rights and responsibilities; • Promotion and prevention; • Early intervention; • Access and inclusion; • Care for carers.
New Horizons: Consultation Exercise on Mental Health, incorporating a review of the 1999 ten year plan	**UK** DEPARTMENT OF HEALTH [DH 2009d]	• Improve mental health services, including prevention; • Drive towards home based care and treatment; • Improve public awareness and reduction of stigma;

KEY HEALTH TOPICS DOCUMENT	**SOURCE (Country/Organisation)**	**THEMES AND RECOMMENDATIONS**
		• Early detection and intervention; • Improved access and continuity; • Innovation and multi-agency commissioning.
DELIVERING THE BAMFORD VISION: Response of Northern Ireland Executive to The Bamford Review of Mental Health and Learning Disability	**NORTHERN IRELAND** NORTHERN IRELAND EXECUTIVE CONSULTATION DRAFT [2009]	• Prevention and mental health promotion for the whole community; • Legislation should promote rights of mental health and learning disability population; • Service reform; • Person-centred approach involving families and carers; • Reduced hospitalisation, seamless community service
INDIGENOUS AND MINORITY GROUPS		
Traveller Health: A National Strategy2002-2005	**IRELAND** DEPARTMENT OF HEALTH AND CHILDREN [DoHC 2002]	• Cultural awareness training for health service staff; • Research Traveller health needs; • Active participation of Traveller representatives in determining their health priorities; • Targeted health strategy.
The Indian Health Improvement Act and Indian Special Diabetes Program Act	**US** US DEPARTMENT OF HEALTH AND HUMAN SERVICES, THE FEDERAL HEALTH PROGRAM FOR AMERICAN INDIANS AND ALASKAN NATIVES [US 1996 & 2003]	• To enhance the Indian Health Service; • Through a comprehensive consultation process; • Establish key policy issues; • Funding for special education for prevention and treatment of diabetes; • Diabetes program.
Family Centred Primary Health Care, incorporating 'Closing the Gap: Tackling Chronic Disease' and the 'Reconciliation Action Plan'	**AUSTRALIA** AUSTRALIAN GOVERNMENT DEPARTMENT OF HEALTH AND AGING, OFFICE FOR ABORIGINAL AND TORRES STRAIT ISLANDER HEALTH [Nov 2007]	• Promote employment; • Celebrate indigenous culture; • Deliver on Health Performance Framework; • Deliver on Regional Partnership Agreements; • Address inequalities in provisioning; • Focus on regional needs and variations; • Long term family support in chronic illness.

KEY HEALTH TOPICS DOCUMENT	**SOURCE (Country/Organisation)**	**THEMES AND RECOMMENDATIONS**
Asylum Seekers and Refugees Health Co-ordination Policy	**UK** DEPARTMENT OF HEALTH ASYLUM SEEKER CO-ORDINATION TEAM [DH 2009e]	• Co-ordinated approach to provision to asylum seekers and refugees; • Information systems on specific cultural needs; • Applies to all asylum seekers.

1.6 Summary

It is a given that the therapy professions in Ireland must be involved in generating knowledge and skills for their practice. This is normally achieved through undertaking quality research. However, such research cannot be carried out in isolation from new and proposed developments in the health service or in separation from government policy. This chapter focused on the relevant policy and strategic reports from Ireland and from other countries. It showed that there was a remarkable amount of health policy overlap across the western world and that Irish health policy reflected the best elsewhere. Examples include *inter alia* the shift from hospital to community care, the greater emphasis on prevention and health promotion, the reduction in health inequalities and a greater focus on clinical and cost effectiveness. These policy objectives set the context for the identification of research priorities for the therapy professions. In the next chapter, a review of the relevant literature will be presented with particular emphasis on the setting of research priorities for these professions.

2. A Literature Review: Research Priorities for the Therapy Professions

2.1 Introduction

A growing body of literature on research priorities within the therapy professions exist, which will set the context for this study. This chapter provides a review of previous national and international research relating to the identification of research priorities in the therapy professions within six professional domains: physiotherapy, occupational therapy, nutrition and dietetics, speech and language, podiatry and orthoptics. In addition, attention will be given to research that explores the priorities of key stakeholder and service users is also presented.

A rigorous search strategy was undertaken to uncover national and international theoretical and research literature pertaining to the identification of research priorities over the past twenty years. The search strategy focused on English language literature and employed a three-stage review protocol. Stage one involved a search of on-line bibliographic databases to include *Ovid Online* (which incorporates the *British Nursing Index, Medline, AMED, CINAHL, PsycInfo*), *Cambridge Scientific Abstracts, Index to Theses, Social Science Citation Index, Proquest, SwetsWise, UKOP, Zetoc, (ISI) Web of Science and Science Direct.* These databases provided access to journals, theses, conference proceedings and government publications. This gave an overview of the available national and international literature. The reference lists of articles were also checked for new relevant sources. This ensured comprehensive coverage of the published literature. Terms and keywords used included physiotherapy, occupational therapy, nutrition and dietetics, speech and language, podiatry and orthoptics, research priorities, and consensus methodologies. Not all articles uncovered were relevant, but those that were appropriate were reviewed in chronological order of publication. This mode of review was chosen because it tracked changes and developments within the topic area.

Stage two involved a search of the key English Language journals. These included the journals that best represent the different therapy professions: *British Journal of Opthalmology; American Journal of Occupational Therapy*; *Acquiring Knowledge in Speech, Language and Hearing;* Physiotherapy *Ireland*; *Podiatry Now; and the Journal of Human Nutrition and Dietetics.* The search terms used at stage one were also used here too. Again not all articles uncovered were relevant.

Stage three of the search strategy involved checking for items that were not identified by the first two approaches. This involved checking the bibliographies of articles produced. This ensured comprehensive coverage of the published literature. Furthermore, internet sites were searched to detect links to voluntary and charity websites locally, nationally and internationally. Other sites such as international Centres of Excellence were identified and contacted to access information regarding on-going relevant projects. Grey literature from appropriate agencies and professional bodies was also accessed: for example, the Health Research Board, the College of Occupational Therapy, the Irish Association of Speech and Language Therapists, the Irish Nutrition and Dietetics Institute, the Irish Society of Chartered Physiotherapists, the Chartered Society of Physiotherapy and the British (and Irish) Orthoptic Society.

2.2 Physiotherapy

No research to date, has been undertaken to explore research priorities for physiotherapists in Ireland, rather, most originates from the UK. For example, the UK Chartered Society of Physiotherapy

identified fifty-six research priorities using the Delphi Technique (CSP, 2002). Conclusions showed that most areas of physiotherapy are in need of substantial investigation and the identified research priorities were used by the Scientific Panel at CSP to allocate research funding. Considering the breadth of specialised practice across physiotherapy, the CSP study applied the Delphi technique to a complex sample comprised of a number of specialised expert panels. The cardio-respiratory expert panel, for instance, identified the top ten topics in need of research in the area of cardio-respiratory physiotherapy, including manual chest physiotherapy, passive exercise in ICU and cardiac rehabilitation in chronic heart failure.

For the purposes of this report, it is useful to look at the sources and journals which feature as links to current evidence based practice topics on the two professional bodies in Ireland and UK: The Chartered Society of Physiotherapists' website (www.csp.org) and the Irish Society of Chartered Physiotherapists (www.iscp.ie). In a recent edition of the journal 'Physiotherapy', the following studies were featured; Whiplash Associated Disorder (WAD); social care in rheumatoid arthritis; evidence based guidelines for the management of shoulder pain; the use of video instruction tapes to enhance exercise uptake for patients with shoulder and back pain (Miller et al 2009); and the effectiveness of strength training in COPD (Houchen *et al.* 2009). Elder health care support is a topic with a significant link from the ISCP website to the PROP project, an initiative which '*aims to enable physiotherapists working in clinical practice with older people to carry out research relevant to their practice'* (www.medicine.tcd.ie/prop).

Another area of innovative investigation in physiotherapy recently headlined on the CSP website is in the application of physiotherapy expertise to mental health. In England, the CSP Clinical Interest Group 'Chartered Physiotherapists in Mental Health Care' (CPMH) recently produced a framework to develop further the potential contribution of physiotherapy to mental health recovery and promotion (CSP, 2007). Service users made a strong contribution to the framework which champions solution-focused, innovative and patient-centred approaches in mental health care. Such innovations provide potential scope for the development and application of research capacity within a specialised area of physiotherapy. Whether these topics should only be researched if they reach sufficient consensus to be considered a priority, however, is a key consideration worthy of further debate.

2.3 Occupational Therapy

According to Bissett *et al.* (2001), identification of research priorities for occupational therapy has been ongoing for over twenty years, most of which has been undertaken outside Ireland. In 1987, for example, six general research priorities were identified in the USA. These included: theory development; development of evaluation and measurement instruments; identification of effectiveness of occupational therapy services; refinement of clinical reasoning; increasing community understanding of occupation; and identification and development of research methods for occupational therapy.

Research priorities for the American Occupational Therapy Foundation (AOTF) and the American Occupational Therapy Association (AOTA) were identified in 1999 at a consensus conference. They included: providing evidence for the effectiveness and cost effectiveness of occupation-based and environmental interventions, and the influence of occupation on health and well being (American Occupational Therapy Foundation, 2003). In 2003 in the United States, the American Occupational Therapy Foundation (AOTF) reaffirmed research priorities and parameters for occupational therapy for use in guiding funding priorities and programme development (See Table 4). These research priorities are rooted in the World Health Organisation's international classification system for function and disability, known as the International Classification of Function, or ICF (WHO, 2001).

Table 4: American Occupational Therapy Foundation Research priorities

	Top 10 Priorities in Occupational Therapy
1	Are occupational therapy interventions effective in achieving targeted activity and participation outcomes and preventing/ reducing secondary conditions?
2	To what extent does occupation-based intervention promote learning, adaptation, self-organisation, adjustment to life situations, and self-determination across the life span?
3	Are environmental interventions that support occupation effective in preventing impairment and promoting activity and participation at the individual, community, and societal levels?
4	Where, when, how, and at what level (Body Structure/Body Function, Activity, Participation, and Environment) should an occupational therapy intervention occur to maximise activity and participation, as well as cost-effectiveness of services?
5	What measures/measurement systems reflect the domain of occupational therapy and identify factors (body structure/body function, activity, participation, and environment) or document the impact of occupational therapy on these factors?
6	How do activity patterns and choices (occupations), both in everyday life and across the life span, influence the health and participation of individuals?
7	What is the impact of activity patterns and choices (occupations), both in everyday life and across the life span, on society?
8	What are the conceptual models that explain the relationships among body structure/body function, activity, environment, and participation? What is the role of occupational therapy within these models?
9	What factors contribute to effective partnerships between consumers and practitioners that foster and enhance participation of individuals with or at risk for disabling conditions?
10	What factors support occupational therapy practitioners' capacities to maximize the occupational performance of the persons they serve?

(Source: AOTF, 1998)

In 1999, a survey of research priorities in mental health by the Association of Occupational Therapists in Mental Health (AOTMH) confirmed that evidence of the effectiveness of occupational therapy interventions (particularly the core areas using activity and occupation) remains an important theme (Craik *et al,* 1999). These priorities were updated in 2001 at which time they remained fairly similar but, in addition, reflected an increased awareness to involve service users in research, research design, and service delivery (Fowler-Davis & Hyde, 2002). Bissett *et al.* (2001) also identified research priorities for occupational therapy in mental health in Australia. Five themes emerged including, effectiveness of interventions, the influence of occupation on health and well being, and collaboration with service users. Cusick *et al.* (2008) followed up a 1999 national survey of occupational therapy mental health research priorities in Australia with a focus group (n=8) in 2007 and found that topics identified as priorities 10 years ago continued to be seen as relevant and current to mental health occupational therapists. They continued to be concerned about role definition, intervention efficacy, and service delivery method.

An emerging theme in international occupational therapy research forums (Canadian Association of Occupational Therapists, 2006) is collaborative research between researchers, decision-makers, practitioners and service users. This can potentially produce results that are both relevant to practice and can also inform policy. It can also lower the duplication of similar work across disciplines and organizations.

In a study carried out in 1998, the College of Occupational Therapists (COT) found that providing evidence of the effectiveness of interventions was the highest priority for respondents (Ilott & Mountain, 1999). However this was criticised for not providing specific guidelines for any particular area of practice (Duncan *et al.* (2003). COT's, study was replicated two years later which once again, highlighted the effectiveness of specific interventions but also focused on occupational science and occupational therapy service delivery and innovation in a wide health and social care context (Ilott and White, 2002). Between 2002 and 2005, COT identified research priorities for the specialist sections of the profession. Once again, common themes emerged such as: the relationship between occupation, activity and health; the benefits of occupation-focused interventions for quality of life, wellbeing and financial advantage; increased involvement of service users in research; increased evidence base to support occupational therapy interventions; ongoing development of standardised assessment tools; development of outcome measures for occupation-focused interventions (COT, 2007).

In 2005, the COT commissioned the POTTER project (Bannigan *et al.,* 2006) to gain an understanding of the research priorities of its membership across the four UK countries. This involved a literature review of service users' and carers' research priorities and a review of UK national policy documents to identify government priorities for research. Priorities for services users' and carers' revealed health benefits of increasing occupational choice in interventions; lifestyle redesign to achieve everyday living skills; service re-configuration to benefit service users; outcome measures research to link interventions to outcomes; greater inclusion of service users and carers at all stages of the research process. Whilst policy documents included: ageing and older people; cancer; cardiovascular and cerebro-vascular disease; chronic disease management; coronary heart disease; diabetes; endocrinology; epidemiology; genetics; Infectious diseases; mental health; neurosciences; prevention and early intervention; public health; service organisation and delivery; trauma and rehabilitation.

Building on the POTTER Project findings and with additional insights from the service user literature and from the College's specialist groupings, the College of Occupational Therapists (COT, 2007) identified key areas in which research should be focused. Some of the overarching topics were: the relationship between occupation, activity and health; quality of life; service user research; testing interventions; and assessment tools.

Later Bannigan *et al.* (2009) held two consensus conferences and a survey involving a random sample of 25% of the COT membership (n=7,000). However, the response rate equated to 10% of the current BAOT/COT membership. Table 5 outlines the ten top research priorities, which reveals an overarching desire to demonstrate effectiveness (including cost effectiveness) of occupational therapy.

The College of Occupational Therapists (COT, 2007) most recent research priorities for the profession include: effectiveness and cost-effectiveness of occupation-focused interventions; occupation, health and wellbeing; service delivery and organisation; involvement of service users and carers; and the context of research priorities. It would seem that, in general, research priorities in occupational therapy internationally have not changed substantially over the last ten years.

Table 5: Priorities for Occupational Therapy Research (POTTER Project)

	Top 10 Priorities in Occupational Therapy
1	Long-term effectiveness of occupational therapy
2	The benefits of occupational therapy from the service users' point of view
3	Effectiveness of early occupational therapy (that is, in the acute stages of an illness/ disease)
4	Effectiveness of occupational therapy for people with mental health problems
5	Effectiveness of occupational therapy for people with neurological conditions
6	Effectiveness of occupational therapy (in general)
7	Effectiveness of occupational therapy in cognitive rehabilitation
8	Developing new valid and reliable outcome measures for use in occupational therapy
9	Effectiveness of specialist areas of occupational therapy
10	Effectiveness of occupational therapy in intermediate care

(Source: Bannigan *et al*. 2009)

2.4 Nutrition and Dietetics

While the dietetics professional bodies in Ireland have identified research as an important priority, no published data exist regarding research capacity. Prior to the current study no one has previously attempted to identify research priorities for the profession although it is recognised that many dietitians in both Ireland and UK are engaged in research at some level.

The Irish Nutrition and Dietetics Institute has identified current issues and practice initiatives in areas such as coeliac disease, obesity prevention and associated communication management, and diet as related to cancer prevention (www.indi.ie). In the UK, all registered dietitians at qualification are expected to have achieved the knowledge and skills required to understand, interpret and apply research and should maintain or improve upon these throughout their career (BDA, British Dietetics Association, 2007). In its recently published research strategy for 2008–2013 (BDA, 2008) the British Dietetic Association (BDA) identified five key components: leading the research agenda; building research capacity; promoting collaboration and involvement; ensuring high-quality research; and advancement of dietetic practice. In addition, an implementation plan that outlines clear objectives and an action plan to ensure effective delivery of the strategy were outlined.

In the USA, the American Dietetic Association (Castellanos *et al.* 2004) listed major themes for future research for dietetic professionals (see Table 6). Specific research objectives were identified under each priority area. For example, effective nutrition and lifestyle change interventions details the need for research to examine the facilitators, barriers and models that affect how well dietitians implement research in practice. Customer satisfaction research priority details the need for better understanding of the determinants and predictors of satisfaction among the public regarding the type of practice settings (private, health care, long-term care).

More recently, a substantial strategic agenda was produced through which the priorities could be made operational (ADA, 2007). This was across a broad spectrum of research from basic science to clinical intervention and policy work. Overall, the ADA identified research priorities for dietetics, nutrition, behavioural and social sciences, management, basic science, and food science, aiming to enhance optimal nutrition and well-being for all (Manore and Myers, 2003).

Table 6: American Dietetic Association's Research priorities for Dietetics Professionals

	Priorities in Dietetics (no order)
1	Prevention and treatment of obesity and associated chronic diseases
2	Effective nutrition and lifestyle change interventions
3	Translation of Research into nutrition interventions and programs
4	Effective nutrition indicators and outcomes measures
5	Dietetics education and retention
6	Delivery of and payment for dietetic services
7	Access to safe and secure food supply
8	Customer satisfaction
9	Nutrients and gene expression

(Source: Castellanos *et al.,* 2004)

Whilst direction from professional bodies is welcomed, in order to facilitate the successful delivery of such research strategies in practice, a culture change within the profession is required in an environment of competing and demanding clinical commitments.

2.5 Speech and Language Therapy

As with the nutrition and dietetics field, there is very little literature available on research priorities for speech and language therapy in Ireland. This reflects to a large extent the recent entry of this profession into the university sector.

Nevertheless, in an albeit rather dated paper, Van Hattum (1980) in the UK, stressed the need for research directed specifically at speech disorders as well as all aspects of the total communication function. In the 1990s, work was carried out to examine research priorities in augmentive and alternative communication (AAC) (Beukelman and Ansel, 1995). That work advocated studies to evaluate the impact of AAC on communicational development and to develop tools and strategies for the effective measurement of competencies and outcomes.

Another aspect of research in health care provision is systemic research on the provision of therapy services. Winter (1999) described an investigation in Birmingham, England where speech and language therapy managers were asked to profile caseloads in their Trusts in relation to bilingual children. The strong link with educational settings resonates with an ongoing debate in the UK as to how primary care Trusts should plan and deliver speech and language therapy to the school age population (Lindsay *et al.*, 2002).

It would appear from the literature that research in speech and language therapy is strategically and operationally behind that of physiotherapy and occupational therapy. It was surprising that no published work could be found on the identification of research priorities for this discipline. Considering the importance of speech and language therapy across the lifespan and specifically in addressing the strategic priorities such as stroke rehabilitation, the identification of research priorities is a matter for urgent attention.

2.6 Podiatry

As with speech and language therapy there is a dearth of literature on research priorities for podiatry in Ireland and the UK. This again is unsurprising considering the small number of universities offering podiatry training and hence the small number of staff with research or with post doctoral experience.

One notable exception is the Podiatric Research Forum (2003) in the UK, which undertook a real-time Delphi exercise to identify research priorities for the profession. Priorities were identified in 14 areas including research into the effectiveness of treatment, patient compliance and communication. A total of 80 research areas gained consensus and these were then put in order of priority. Later Vernon (2005) used a modified Delphi to determine research priorities in podiatry. In six rounds, eight research priorities were defined which covered 14 broad categories. The most agreed topics related to research into treatment effectiveness, followed by targeting of services, cost-effectiveness of treatment, patient compliance, measures of effectiveness, and clinical assessment tools.

Wider research activity within the podiatry profession has explored areas such as management of heel pain (Rome, 2005) and changes in knowledge, functioning and self-care in patients with diabetic foot problems in the Netherlands. In the Dutch study, not only was ulcer healing noted to have improved post-podiatric care, so too were achievements in the realm of preventive goals (Rijken *et al.,* 1999). The topic of evaluating orthotic foot appliances was the focus of an extensive clinical audit at Norwich Primary Care Trust (Cummings & Reid, 2004).

The role of podiatry within multidisciplinary health care was highlighted in a UK focus-group study by Vernon *et al.* (2005) that explored podiatrists' perceptions of their status as health professionals. Awareness raising campaigns were recommended as a result of the findings that UK podiatrists' suffered a self-perception of low status and low levels of appreciation and recognition as a professional group.

Like other therapy professions (for instance the growing number of physiotherapists employing acupuncture in their practice and research work), some podiatrists have studied the use of alternative treatments. For instance, Khan *et al.* (1996) carried out a double-blind placebo controlled trial of marigold oil, paste and tincture therapy for the treatment of plantar lesions (corn and callus formations), finding it to be an effective treatment.

The University of Galway have introduced a podiatry course but since this is a recent initiative, the building of research capacity in this profession is at a very early stage of development. Therefore, with proper targeted resources there will be a delay in the capability of Irish podiatrists to produce high quality research that will lead to high quality practice. In the interim, it is likely that the best available evidence in podiatry will be underpinned by research from other countries.

2.7 Orthoptics

Eye health is addressed on a world wide scale by the International Centre for Eye Health, at the Institute of Opthalmology in London. It concentrates especially on WHO priorities for the improvement and prevention of childhood low vision and visual problems (Minto and Awan, 2001). In Ireland and the UK, these global priorities have been taken into the research and practice development agenda for ophthalmology and related disciplines. Rahi *et al.* (2001) have commented that these goals depend on primary, secondary and tertiary preventive strategies like screening and rehabilitation at all ages but especially in early years. Linked with ophthalmology and optometry, the knowledge and skill base of orthoptics involves the study and assessment of visual development,

binocular vision, eye movements and eye co-ordination. Orthoptists are uniquely skilled in diagnostic techniques, clinical assessment and non-surgical treatment of eye problems such as strabismus/squint, diplopia/double vision and amblyopia/reduced vision as well as other less common visual disturbances (BIOS, British and Irish Orthoptics Society, 2006).

Audit and research has been the subject of two major publications of the British (and Irish) Orthoptic Society. The professional development committee set out guidelines for clinical audit (British and Irish Orthoptic Society (BIOS) 2006) and more recently, professional paper No 5 set out a detailed research strategy for the profession (British and Irish Orthoptic Society (BIOS) 2008). In light of the need to produce evidence based care within broader national service frameworks, translational research was emphasised at the outset, linked with aims to develop research career profiles across academic and clinical settings. Broad plans for 2008-2013 are identified as the instigation of multi-centre and multi-disciplinary research programmes alongside the facilitation of individual research exploits. Operationally, this entails research training, research dissemination and a dynamic culture characterised by '*the inclusion of research activity in every department by every orthoptist so that research becomes the norm rather than an activity only undertaken by a minority'* (p26).

Orthoptics has also been a recent addition to Ireland and UK university sector. Currently, there is no university course on Opthortics in Ireland. This would explain why a comprehensive search of the literature only produced a small number of research papers that deal with research priorities in this profession. As with podiatry, a significant investment would be required to enhance research capacity and capability.

2.8 Key Stakeholders and Service Users

A broad range of stakeholders and service users, have valid perspectives on research priorities for the therapy professions. Key stakeholders include senior health service managers and policy makers. Because they are often the architects of health strategies and reorganisations it is legitimate to seek their views on what future research is required to address new developments in the sector and identify how best to meet the future health needs of the Irish population. Furthermore, publically funded research should not centre on esoteric topics of interest only to the professions. Rather, it should focus on improving the management and the delivery of the service so that the health and wellbeing of patients, their families and communities are enhanced. For instance, in the 2005 POTTER study Bannigan *et al.* (2006) suggested that research priorities identified by occupational therapists do not always correlate with government priorities for research. In this study, it is hoped that key stakeholders and service users will help bring this perspective to bear on the identification of research priorities.

In Ireland, an initiative resulting from the recommendations of *A Vision for Change* (DoHC 2006c) has been the creation of the National Service Users' Executive, NSUE, (www.nsue.ie). With the involvement of mental health service users and carers, the NSUE sphere of activity seeks to achieve the following,

'To inform the National Health Service Directorate and the Mental Health Commission on issues relating to user involvement and participation in: planning, delivering, evaluating and monitoring services and including models of best practice..To develop and implement best practice guidelines between the user and provider interface including capacity development issues'.

Wide networks of support organisations for people with a range of disabilities are active within Irish society (see The Citizen's Information Board for a Directory, www.citizensinformation.ie). The HSE

also plays an active role in the articulation of the service user voice, through *The National Strategy for Service User Involvement in the Irish Health Service (DoHC 2008e www.hse.ie),* including the development of a Patients' Charter.

However, there is very little evidence on the issues considered important by service users across the therapy professions (Jones *et al.,* 2009). Indeed there is, much debate on the advantages and disadvantages of various modes of incorporating 'lay perspectives' (Entwistle *et al.,* 1998) and 'consumer involvement' (Boote *et al.,* 2002).

Two notable exceptions in the UK relate to Parkinson's disease and mental health. Jones *et al.* (2007) involved service users with Parkinson's disease and their carers in formulating a research agenda for a rehabilitation research group. While Sayce (2000) noted mental health service user lobby having a particularly high profile within the disability movement (Sayce, 2000), mental health services feature significantly in literature and reports related to service user involvement in research. For instance, a UK wide series of Mental Health Task Force User conferences, as well as a literature review, revealed ten major priorities for service development that although originating in mental health, could conceivably be relevant to any form of disability or service user profile. The priorities included access, advocacy, user run services, expert as well as practical help and responsiveness to individual needs and conditions (Thornicroft *et al.,* 2002). These authors go on to describe initiatives within one particular NHS Trust (South London and Maudsley) where service users took an active role in the identification of mental health research priorities for the Trust. Emergent criteria included user involvement in all stages of the research process, arts as therapies, alternative therapies and addictions research (p.2). It was noted too that 'service users' priorities were not the same as those identified by professionals and funding bodies' (p.3).

Alternatively, there is a growing desire for service users to commission, indeed, to lead their own research studies and to produce and disseminate health care knowledge (Pathways, 2002; Beresford, 2007; Preston-Shoot, 2007). The Parkinson's Disease Society's research agenda reflects both the views of people with PD and the research community. The treatment of non-motor symptoms and the role of and support for, carers were two of the six priority areas identified for the period 2005-2009 (PDS Research Team, 2007)

According to Bennett *et al.* (2006), setting research priorities is influenced by many factors. For example, stakeholder groups (including researchers, institutions, agencies, professions and government) undertake research priority setting with each approaching the process in a different way. They suggested that research priorities need to be informed by many factors including demographic trends, public health needs, and pragmatic factors such as the feasibility of research, availability of research resources and the potential cost effectiveness of an intervention.

It has become apparent that the results of this research must be triangulated across the range of expert panels from professions, key stakeholders and service users in order to present a cohesive action plan for research among the therapies (McDonough, 2009). The key stakeholder panel is derived from a range of senior managers in the HSE (therapy and general) and policy officers in various government departments. For instance, the inter-departmental Health Research Group (HRB 2009) has been active since May 2007, particularly in relation to the Therapy Research Strategy (DoHC, 2008a).

2.9 Summary

This review demonstrates clearly the shortage of research within the therapy professions in Ireland. In this regard it reflects sentiments expressed in the Mant Report (Health Research Board, 2006) and *Therapy Research - Delivering Best Health: A Research Strategy for the Therapy Professions in Ireland 2008-2013 (DoHC,2008d).*This does not auger well for their role in the achievement of the strategic objectives alluded to in the many policy documents outlined in Chapter 1. It would also appear from the literature that research capacity and capability is more advanced in some therapy professions than in others. Physiotherapy, nutrition and dietetics and occupational therapy have a track record of being university based and of being research active. In contrast, speech and language therapy, podiatry, and orthoptics are at an earlier stage of development. Furthermore, while this review has identified some important topics that practising therapy professionals consider to be priorities, it is apparent the most of this stems from the UK and the US. Moreover, despite calls from professional bodies and government departments the actual volume of research remains low with little evidence of service user or key stakeholder involvement being reported.

3. Methodology: The Delphi Research Approach

3.1 Introduction

The aim of this study was to identify research priorities for the therapy professions in Ireland. These priorities cover broad areas for research to more profession-specific topics. This chapter will describe the Delphi research technique and outline the methods used to collect the data across the three rounds and eight panels.

3.2 The Delphi Technique

The Delphi technique is a structured process that uses a series of questionnaires (known as 'rounds') to gather information. This process continues until consensus has been reached (McKenna & Keeney, 2008; Keeney *et al.* 2006). Originally developed by the RAND Corporation, the technique was named after the Greek Oracle at Delphi. Since its inception the 'Delphi' has evolved into a number of modifications. Each type of Delphi has one of two aims – to either gain consensus on an issue or to identify priorities – but can differ in the process used to reach these aims. The different types of Delphi include the classical Delphi (McIlfatrick and Keeney, 2003), the modified Delphi (McKenna, 1994), the policy Delphi (Crisp e*t al.*, 1997; Rayens and Hahn, 2000), the real-time Delphi or Conference Delphi (Beretta, 1996; Gordon and Pease, 2006) and more recently the e-Delphi (Avery *et al.*, 2005; McIlrath *et al.* 2009). There are a large number of studies in the literature that used these different manifestations and this is a tribute to the flexibility of the method. Three members of the research team have published and presented internationally on this methodological approach over a period of twenty years (McKenna, Keeney and Hasson).

The Classical Delphi, which was used in the present study, involves the presentation of a questionnaire to a panel of 'informed individuals' (known as experts) in order to seek their judgment on a particular issue. After they have responded, data are summarised and a new questionnaire is designed based solely on the results obtained from the first round of results. This second questionnaire is returned to each participant and they are asked (in the light of the first round's results), to reconsider their initial judgement and to once again return their responses to the researcher. Repeat rounds of this process may be carried out until consensus, or a point of diminishing returns, has been reached. In essence, the Delphi technique is a multistage approach with each stage building on the results of the previous one. Hitch and Murgatroyd (1983) viewed the technique as resembling a highly controlled meeting of experts, facilitated by a chairperson who is adept at summing up the feelings of the meeting by reflecting the participants' own views back to them in such a way that they can proceed further - the only difference is that the individual responses of the members are unknown to one another.

3.2.1 Expert Sample

An expert panel has been defined as: a group of 'informed individuals' (McKenna, 1994); 'specialists' in their field (Goodman, 1987); and an expert is defined as someone who has knowledge about a specific subject (Davidson *et al.,* 1997; Lemmer, 1998, Green *et al.*, 1999). Deciding on what experts to include in the Delphi panel is regarded as the 'linchpin of the method' (Green *et al.*, 1999) and is the first step in this methodological process. However, there is no universal agreement on what size the expert panel should be and little agreement exists regarding the relationship of the panel to the

larger population of experts and the sample method employed (Green *et al*., 1999, Williams & Webb 1994).

The importance of using 'criteria' to select a Delphi expert panel has been growing in popularity and prevalence in recent years (Keeney *et al*. 2006). For example, criteria may include having published at least one paper in the area of investigation if it is an academic issue, or having ten years clinical experience in a certain role if the topic of investigation requires specific clinical knowledge.

3.2.2 Consensus

Lindeman (1975) maintained that the Delphi is especially effective for those difficult areas that can benefit from subjective judgments on a collective basis, but for which there may be no definitive answer. Therefore, it would be difficult, if not impossible, to achieve 100% consensus between any group of people on such issues and experts are no exception. A key concept within the Delphi and one which has stimulated much debate is what percentage of agreement among expert panel members constitutes consensus. Loughlin and Moore (1971) believed that 51% was an acceptable consensus level. Other researchers have set much higher levels of consensus including Green *et al.* (1999) who set their consensus level at 80% while McKenna *et al.* (2002) used a level of 75%. While there is no universal agreement or guidelines on the level of consensus, Keeney *et al.* (2006) suggested that researchers should decide on the consensus level before commencing the study and consider using a high level of consensus such as 70%.

3.2.3 The Delphi Technique and Health Research

The use of the Delphi technique in health research generally has been increasing rapidly in recent decades. Bond and Bond (1982) used the technique to establish clinical nursing research priorities as did many others (Lindeman, 1975; Alderson *et al*., 1992; Forte *et al*., 1997; Lynn *et al*., 1998; Daniels and Ascough, 1999; Soanes *et al*., 2000; Cohen *et al*., 2004; Annells *et al*., 2005; Back-Pettersson *et al.,* 2008). The use of the Delphi technique to identify research priorities in other areas of health research is also common, including school nursing (Edwards, 2002); HIV/AIDS research (Sowell, 2000); occupational health (van der Beek *et al.,* 1997; Sadhra *et al.,* 2001); occupational medicine (Harrington, 1994; Macdonald *et al.,* 2000); health sector library and information services (Dwyer, 1999); oncology (Browne *et al.,* 2002; Efstathiou *et al.,* 2008); paediatric haematology, oncology, immunology and infectious diseases (Soanes *et al.,* 2003) emergency care (Bayley *et al.,* 1994; 2004; Rodger *et al.,* 2004); midwifery (Fenwick *et al.,* 2006; McCance *et al.,* 2007; Butler *et al.,* 2009); respiratory medicine (Sheikh, 2008); orthopaedic nursing (Salmond, 1994; Sedlak *et al.,* 1998); paediatric cancer nursing (Monterosso, 2001); health informatics (Brender *et al.,* 1999); dentistry (Palmer and Batchelor, 2006; Dolan and Lauer, 2008); urologic nursing (Demi *et al.,* 1996) and public health (Misener *et al.,* 1994).

It is well recognised that health and healthcare, and consequently priority areas for health research, are embedded in social, environmental and economic conditions regionally, nationally and internationally (Labonte & Spiegel, 2003). Web based searches *through* academic libraries and databases, as well as the increasingly used Google Scholar, on the term 'Health Research Priorities' calls up over three million references. The most significant spans across topics as wide as environmental impact on health, women's health, AIDS and vaccine research in developing countries.

Consensus methods have been increasingly applied to identify health research priorities at national and professional level. In the UK and Irish critical care arenas in particular, Vella *et al.* (2000) argued for "*the need to involve as many legitimate stakeholders as possible in the identification and*

prioritisation of research topics" (p.976). This is especially so in order to gain a sense of increased ownership and thus likelihood for active uptake among all groups involved.

3.2.4 Research Capacity Building

The extent to which practitioners make use of research findings is a major concern. With regard to Primary Care in the UK, a review by McKenna *et al*. (2003) revealed that practice was not always research-based and that research activity was patchy. Attitudes of Northern Ireland psychiatric nurses to research, as well as the availability of managerial and support structures that encourage research awareness and uptake, were often *ad hoc* in nature and the application of research findings in practice was weak (Parahoo, 1999). More recently, Pennington (2001) cited a number of barriers which preclude the transition of research into speech and language practice including, lack of time, resources and confidence in assessing and evaluating the research literature.

It is crucial therefore that research capacity building among health professions is incorporated into a dynamic strategy. One such regional initiative is reported by McCance *et al.* (2007). Using consensus methods, they addressed both the 'using' and 'doing' of research, as part of the research and development agenda for nursing and midwifery. Twelve priority areas were identified including the fostering of leadership and research expertise among individuals and organisations, all within a broad perspective and range of capacity building measures.

Since 2004 the all-Ireland Rehabilitation and Therapy Research Society (RTRS) has concentrated its efforts in developing capability and capacity for research among occupational therapy, speech and language therapy and physiotherapy. Within these three professional groups, physiotherapy shows the greatest capacity (see Hurley *et al.,* 2004). However, this is still limited to a small number of members of the Irish Society of Chartered Physiotherapists (ISCP), primarily those in academic practice and graduate students (full and part time, taught and research) as well as those members of established physiotherapy research groups. Indeed, in a national survey of members of the ISCP (Culleton-Quinn and Yung, 2001), only 14.4% of respondents had completed post-qualification research. It has been noted that while research activities within the profession of physiotherapy have increased in the past two decades, there is not a substantial body of work in any major subspecialty within physiotherapy.

From an analysis of research activity recorded in the UK Register of Therapy Researchers (physiotherapy, occupational therapy and speech and language therapy), Illott and Bury (2002) analysed research capacity within the therapy professions. Members were active in a range of roles, from lead grant holder to participation in ethics and national Research and Development committees. They asserted that as an essential element of evidence based health care, research activity as well as research consumption should be continually and strategically developed, through research targets, dedicated centres for research, and investment in post-doctoral training. This resonates clearly with the aims and activities of the RTRS in Ireland.

3.2.5 Use of the Delphi Technique in Therapies Research

The Delphi technique has been used for many purposes within the therapy disciplines. For instance, Henschke *et al.* (2007) used a modified Delphi survey to determine the research priorities of those who manage low back pain. In addition, Ferguson *et al.* (2008) undertook a three-round Delphi in physiotherapy to gain consensus on issues around referrals for low back pain to outpatient physiotherapy. Research using a modified Delphi approach was undertaken in dietetics across seven countries in the European Union (EU) and the USA and Australia to gain consensus among an international expert panel on essential competencies required for effective public health nutrition

practice (Hughes, 2004). Other studies using the Delphi to focus on specific therapy areas have included best practice in occupational therapy for Parkinson's Disease (Deane *et al.,* 2003); speech and language therapy criteria for a framework for practice (Rice 1998); intervention categories for physiotherapy for functioning, disability and health (Finger *et al.* 2006); physiotherapists' use of information in identifying concussion (Sullivan *et al.* 2008); defining the sports medicine specialist (Thompson *et al.* 2004); occupational therapy research priorities in mental health (Bissett *et al.* 2001) and leadership, administration, management and professionalism in physiotherapy (Lopopolo *et al.* 2004).

3.3 Methodology

In this study, a three round classical Delphi technique (McKenna, 1994) was used to identify research priorities for the therapy professions from expert panels recruited across Ireland. Therefore, this was a large multi-panelled Delphi study including experts from six different professional areas and two further areas representing the perspectives of key stakeholders and service users.

3.3.1 Consensus Level

The consensus level for this study was determined at the outset as 70%. This means that an identified research idea or issue had to achieve agreement from 70% of the specific expert panel before it could be considered to be a research priority.

3.3.2 Recruitment of the Expert Panels

The expert panels for this study were recruited from different sectors relevant to the therapies professions. This included:

Professionals working in the clinical areas:

- Podiatrists;
- Dietitians;
- Occupational Therapists;
- Orthoptics;
- Physiotherapists;
- Speech and Language Therapists.

Academics from the above therapy professions working in higher education institutions

- Universities;
- Further and Higher Education Colleges.

Key Stakeholders

- Department of Health and Children;
- Health Service Executive;
- Population Health;
- Health Information and Quality Authority (HIQA);
- Mental Health Commission
- Relevant statutory and voluntary agencies;
- Charities;

Service Users

The professional (clinical) panel members were recruited through the following professional organisations:

- The Society for Chiropodists and Podiatrists in Ireland;
- Institute for Nutritionists and Dietitians in Ireland;
- The Irish Membership of the British and Irish Orthoptics Society;
- The Irish Society of Chartered Physiotherapists;
- The Association of Occupational Therapists in Ireland;
- The Irish Association of Speech and Language Therapists.

The academic panel members were recruited through universities and further education Colleges across Ireland. Policy makers and other key stakeholder panellists were recruited from government departments and health service organisations. Service users were recruited through support organisations.

An extensive trawling exercise was undertaken to recruit members to each of the panels, during which potential panel members were contacted and asked to take part in the study. The planned target size for each panel in this study was thirty. Following a comprehensive recruitment campaign, some panels have exceeded that target considerably while others for a variety of reasons have not. For instance, as the study progressed, it became apparent that the target of thirty was not realistic for some of the smaller therapy professions.

This study is set within the context of national health strategies and policies. It draws from the expertise within the Irish health care system. A variety of levels of seniority have also been sought in the construction of the expert panels so as to gain a diversity of ideas and viewpoints. There was also a strong desire to have an extensive rural and urban spread of experts.

3.3.3 Inclusion Criteria

Expert panel members had to meet specific inclusion criteria to be eligible to take part in the study. Criteria differed slightly for the smaller therapy disciplines to ensure adequate representation. For instance the podiatry and orthoptic professions were only in the process of entering higher education and this influenced the number of academic staff who could take part in these two panels.

Inclusion criteria for therapies professionals working in the clinical area

- Must have 3 years post-qualification experience in the clinical area;
- Must be currently employed in a clinical area;
- Willing to participate.

Inclusion criteria for academics working in the therapies disciplines

- Must have 3 years post-primary degree experience in working in an academic setting (university or further education college);
- Must be currently employed by a university or further education college;
- Willing to participate.

Inclusion criteria for key stakeholders and service users

- Must be employed by a relevant therapies focused organisation or department;
- Should have been in post for at least three years;
- Willing to participate.

OR

- Should be a service user who has used statutory therapy services within the last six months;
- Willing to participate.

3.3.4 Expert Panel Composition

There were a total of six professional expert panels which included both clinical and academic staff. Each panel member met the appropriate inclusion criteria. The numbers included in the six professional panels are shown in Table 7 below. The number of experts in the key stakeholder and service user panels are also detailed in Table 7. The full Delphi sample totalled 245 expert panel members. Table 8 provides a breakdown of the composition of each expert panel at the outset of the study.

Table 7: Number of Respondents in the Expert Panels

Panel	Size
Physiotherapy	63
Occupational Therapy	39
Clinical Nutrition and Dietetics	39
Speech and Language Therapy	41
Podiatry	15
Orthoptics	9
Key Stakeholders	24
Service Users	15
Total	245

Table 8: Composition of Expert Panels at Round One

PANEL	COMPOSITION	TOTAL NUMBER
Key Stakeholders	Health Managers - 8 Senior Therapy Managers - 8 Government Policy Officers - 6 Research and Development Officer - 1 Deputy Commissioner - 1	24
Physiotherapy	Academics – 23 Clinicians / Managers – 40	63
Occupational Therapy	Academics – 14 Clinicians / Managers – 25	39
Nutrition and Dietetics	Academics – 6 Clinicians / Managers – 33	39
Speech and Language Therapy	Academics – 18 Clinicians – 23	41
Podiatry	Academics – 2 Clinicians / Managers – 13	15
Orthoptics	Academic – 1 Clinicians / Managers – 8	9

Service Users	Individuals – 8 Organisations: Disability Federation of Ireland; Diabetes Federation of Ireland; Cystic Fibrosis Association of Ireland; Irish Hospice Foundation; Parkinson's Association of Ireland; Asthma Society of Ireland; GROW Mental Health; Total – 7	15
Total		**245**

3.3.5 Round One

As is the norm for the Classical Delphi, round 1 was qualitative in nature. Each expert panel member was sent an information pack with the first round questionnaire (see Appendix 1). The information pack included instructions on how to complete the round 1 questionnaire as well as information about the study, expectations of panel members within the study, information on consent, and information on withdrawal from the process. The first round questionnaire collected demographic information such as age, gender, years' experience, qualifications, and to which of the therapies professions they belong. The question that the round 1 questionnaire posed was: **What do you think are the research priorities for your profession at present?** A variation on this question was used for service user and stakeholder expert panels: **What do you think are the research priorities for the therapies professions at present?**

Members of the expert panels were invited to complete up to ten priorities and asked to keep their responses as concise as possible. Round one responses were returned to the researcher by means of an enclosed stamped addressed envelope. Two sets of reminders were sent to each member in each panel to maximise the response rate.

Analysis of round one

Round 1 of the Delphi produced copious amounts of qualitative data from each of the eight panels. This comprised hundreds of individual statements on research priorities. These were content analysed for themes using Miles and Huberman's (1994) approach. Once the Round 1 transcriptions and analysis for each panel was undertaken, these results were used to design the Round 2 questionnaire. Both the content analysis and the Round 2 questionnaire were reviewed independently by two experts for each of the six professional groups. The Principal Investigator did this for the key stakeholder and service user groups (He is a non executive director of the Northern Ireland Service User Group – the Patient and Client Council and has experience in health policy analysis and involving service users in research).

3.3.6 Round Two

The Round 2 questionnaire was designed using the items generated from Round 1 for each expert panel (see Appendix 2). Research priorities were listed in no particular order and expert members from the appropriate panel were sent the questionnaire along with instructions on how to complete it. They were asked to rate each of the priorities on a five point Likert scale from 'most important' to 'least important'. Again panel members were asked to return the completed questionnaire within the given time period using an enclosed stamped addressed envelope. Once returned to the researcher, a master code was allocated to link each expert panel members' responses to each round. Two sets of follow up reminders were sent to expert panel members to keep the response rate as high as possible.

Analysis of round two

Data from each panel returned in Round 2 questionnaires were inserted into SPSS for analysis. Summary statistics (frequencies; descriptives) were computed on the data to determine the number of statements that had reached over 70% consensus at that stage. It is the practice with Delphi that those statements that had reached consensus were eliminated at this stage and not included in a Round 3 questionnaire. A list of these was provided to the expert panel. It was made clear to them that this does not mean that these are the highest research priorities, merely that they have reached 70% consensus in Round 2.

The medians of the remaining statements (that had not reached consensus) were calculated using SPSS. This was used to give feedback to the expert panels on both their panel's overall response from Round 2 and the individual's own response.

3.3.7 Round Three

Round 3 of the Delphi was designed around the results of Round 2 (see Appendix 3). It provided feedback to each of the expert panel members on the statements put forward to date and provided an opportunity for them to change their response from the previous round. Statements that had not yet reached consensus were presented again and three columns of information were provided beside each statement:

- The individual's response from the last round;
- The group response (median);
- A space for the individual to change their response.

Round 3 was sent to each expert panel member with clear instructions on how to complete the round. As with the previous rounds, they were asked to return the completed questionnaire within the allocated time period using an enclosed stamped addressed envelope and two sets of follow up reminders were sent as necessary and every possible effort was made to keep the response rate as high as possible.

In addition, a second rating scale was administered at Round 3 to ascertain the experts' judgements on the ideal timescales for addressing each of the identified priorities. The key to the timescales was outlined in the cover letter and instructions to respondents as follows:

- **Short Term** – Research should be commenced immediately;
- **Medium Term** – Research should be commenced within the next 12 months;
- **Long Term** – Research should be commenced within the next 5 years.

Analysis of round three

As Round 3 was the last round of the Delphi process for this study, overall analysis was undertaken at this stage. This involved entering Round 3 responses into SPSS. As before, frequencies and descriptives were computed on the data to determine the number of statements that had reached consensus. All such statements were added to those that had previously reached consensus in Round 2. This formed the final list of research priorities. The mean of each of these statements was calculated and used to rank the statements in order from most important to least important. The top twenty priorities from each panel are presented in the findings section of this report. Identified timeframes for implementation of these priorities are also included with these results. Full lists of ranked consensus items for each panel are also provided as appendices.

3.3.8 Response Rates

Table 9 shows the response rates to the three Delphi rounds. The Delphi is notorious for its low response rates as the number of rounds increases. This is not surprising considering that the researchers are asking busy individuals to respond to what is in essence three different surveys. Accepting this, the overall return rate of 67% is laudable.

Table 9: Response rates to Rounds 2 and 3

PANEL	ROUND 1	ROUND 2	ROUND 3
Key Stakeholders	24	22 (91%)	15 (68%)
Physiotherapy	63	55 (87%)	35 (64%)
Occupational Therapy	39	34 (87%)	16 (47%)
Nutrition and Dietetics	39	30 (76%)	21 (70%)
Speech and Language Therapy	41	30 (73%)	20 (67%)
Podiatry	15	13 (87%)	10 (76%)
Orthoptics	9	7 (78%)	6 (86%)
service users	15	8 (53%)	6 (75%)
Total	**245**	**199 (79%)**	**129 7%)**

3.3.9 Reliability and Validity

As with any research study, issues of rigour and trust are important. Lincoln and Guba's (1985) criteria for rigour in qualitative studies were applied. These are: credibility (truthfulness), fittingness (applicability), auditability (consistency) and confirmability.

A number of authors (Sackman 1975; Woudenberg 1991) have challenged the Delphi method claiming that the reliability of measures obtained from judgments is questionable. As the responses from different panels to the same question can differ substantially the consensus achieved in later rounds may be attributed to pressure to conform rather than a genuine consensus of opinions. Nonetheless, the methodological criticisms of the Delphi are similar to those targeted at any survey that uses questionnaires to obtain data.

Validity is also an area that requires careful consideration when using the Delphi technique. Goodman (1987) believed that because panel members have in-depth knowledge of the issue under investigation, content validity is assured. Furthermore, she states that the use of successive rounds increases concurrent validity. In the present study, the expert panels have the best insight into what the research priorities for therapy professions should be. Therefore, the validity of the results is strong.

3.3.10 Ethical Considerations

The Delphi technique is open to the same ethical considerations as any postal survey (Keeney *et al.*, 2001). Written consent was gained from each expert panel member before the study commenced.

This was explained in a letter to all members of the Delphi expert panels, along with a written explanation of the research. Expert panel members were informed that they could withdraw from the study at any time. Assurances were provided on the confidential nature of the data, with expert panel members not being identified in any way during the research process.

It should be noted that complete anonymity is not possible when using the Delphi technique. This is because to undertake successive rounds the researcher needs to be able to link the panel member with their responses. The reason for this is due to the fact that the researcher will provide feedback in the form of their individual response to the previous round as well as the overall group response. It is also often the case that panel members may know other panel members. This is expected in a small profession or geographic area but it is important to note that they cannot attribute responses to any other member. It is like being in an elite 'expert' club where the membership is known but they do not meet face to face to discuss their individual decisions. McKenna (1994) used the term 'quasi-anonymity' to describe this situation. Rauch (1979) postulated that knowing who the other subjects are should have the effect of motivating the panelists to participate.

This assurance of quasi-anonymity also facilitates panel members to be open and truthful about their views; this, in turn, provides insightful data for the researchers. The only difficulty in this scenario may be if a panel member and the researcher know each other and the former's responses are influenced because of this. This was not an issue in this study. The concept of quasi-anonymity was made explicit in the information provided to potential expert panel members before the study commenced.

3.4 Summary

In summary, the aim of this study was to gain consensus on the research priorities for six therapy professions. The literature shows that one of the best approaches to achieving consensus is to employ the Delphi technique. In this study, 245 individuals were recruited into a three round Delphi. A consensus level of 70% was set and the overall response rate of 67% was achieved. Tried and tested arrangements were followed with regard to ethical considerations and the methodological rigour of the research.

4. Findings and Discussion

4.1 Introduction

This chapter will outline the findings from the Delphi process for each expert panel. Each section will cover response rates, the demographic profile of the panel and the top twenty priorities identified by expert panel members. Discussion of the priorities is included for each panel. The timeframes for addressing these priorities are also discussed. Furthermore, a comparison with the priorities identified by the service user panel and the key stakeholder panel is included within each of the professional panel sections.

4.2 Physiotherapy

4.2.1 Response Rates

63 physiotherapists responded to the round 1 questionnaire, 87% (n=55) responded to round 2 and 64% (n=35) responded to round 3.

4.2.3 Demographic Profile

Most of the physiotherapy panel were female (86%) and were aged between 25-44 years (74%). Over half of the panel were qualified more than ten years, with only 27% qualified between 6-10 years and 22% qualified between 16-20 years.

4.2.4 Research Priorities

There top 20 priorities for the physiotherapy panel are shown below in Table 10.

Table 10: Top Twenty Research Priorities identified by Physiotherapy Panel

RESEARCH PRIORITY	Mean	Con Level	Rank	Time frame
Research on how best to create a career pathway that rewards further education.	4.49	89.1%	1	Medium
Research the effectiveness of various interventions in rehabilitation in chronic disease: respiratory; COPD; cardiovascular disease; stroke.	4.42	92.7%	2 (joint)	Short
Research the effectiveness of Primary Care Teams and physiotherapy in preventing acute hospital admissions.	4.42	92.7%	2 (joint)	Short
The underpinning of clinical practice with an evidence base – how best to evaluate interventions.	4.42	87.2%	4	Medium
Identify optimal exercise interventions and evaluate their efficacy for prevention and management of chronic disease for various patient populations / conditions e.g. cancer, neurology, arthritis, pelvic floor dysfunction, obesity, back pain across the age ranges.	4.40	89.1%	5	Medium
Research the physiotherapy role in reducing disability and improving the quality of life in the older population.	4.38	92.7%	6	Medium
Research the role of exercise in the prevention of childhood	4.36	87.2%	7	Short

RESEARCH PRIORITY	Mean	Con Level	Rank	Time frame
obesity.				
Evaluate the role of physiotherapy within multidisciplinary approaches to health promotion and prevention of various conditions and events: falls in the elderly; bone health; osteoporosis.	4.31	89.1%	8	Medium
Randomised controlled trials for a range of interventions: manipulative therapy; electrotherapy; Bobath versus normal movement; cardio-respiratory techniques.	4.31	85.5%	9	Medium
The underpinning of practice with an evidence base – how best to engage / educate clinicians.	4.29	85.5%	10	Medium
Evaluate how to increase research capacity through career development / protected research time for clinicians / 'research activity' as a required component of clinical roles.	4.25	85.5%	11	Short
Ascertain the validity and reliability of clinical assessment techniques.	4.22	85.5%	12	Medium
Conduct comparative studies of various interventions and modes: group v individual; conservative v innovative; in musculoskeletal; in elderly rehabilitation.	4.22	81.8%	13	Medium
Health Economics of therapeutic interventions – identify the cost-effectiveness of therapy intervention and apply to service prioritisation.	4.20	87.3%	14	Medium
Research and evaluate stroke rehabilitation, including the effectiveness of home based physiotherapy programmes from a rehabilitation centre post-stroke.	4.20	85.5%	15	Medium
Research around the creation of further clinical grades i.e. advanced practitioner / prescribing / consultant.	4.20	83.6%	16	Medium
Evaluate the effectiveness of physiotherapy interventions in Intensive Care Units.	4.20	81.8%	17	Medium
Ensure that researchers are equipped with the resources necessary to compete on the world stage and ensure exportability of graduates.	4.20	78.1%	18	Medium
Evaluate aerobic and resistance exercise in the management of osteoporosis / promotion of bone health across a range of conditions e.g. respiratory, cancer, rheumatological conditions.	4.18	87.2%	19	Medium
Role of physiotherapy in health promotion – how best to plan, implement and evaluate input	4.18	78.2%	20	Medium

4.2.5 Key Themes for Physiotherapy Panel

The key themes emanating from the physiotherapy panel's top twenty research priorities were practice evaluation, health promotion, embedding research into practice and service organisation.

Need to evaluate practice/methods for evaluation

45% (ranks 2, 4, 7, 9, 12, 13, 14, 15, 17, 19) of the top ranked items highlighted the need to evaluate interventions and techniques used in clinical practice. Where these were specifically identified, some are commonly used for musculoskeletal conditions (manipulation, electrotherapy,

aerobic and resistance exercise for bone health), whereas others are used for managing neurological patients (e.g. Bobath versus normal movement) or techniques used in an area of practice, such as cardiorespiratory techniques. Some items related to the mode of practice (group versus individual rehabilitation for musculoskeletal/elderly rehabilitation, rank 13) or location of practice (home based versus centre based for stroke rehabilitation, rank 15). It is interesting to note that novel interventions (especially technologies such as robotics and virtual reality) were not identified in the top twenty priorities being just below the consensus level of 70% at round 3. However, item 13 did state that innovative versus conventional approaches should be explored in musculoskeletal conditions and elderly rehabilitation.

Other more general items highlighted the need for validity and reliability of clinical assessment techniques (rank 12) and the need for health economics of therapeutic interventions in order to prioritise service delivery (rank 14).

Linked to the need to evaluate practice were two statements about underpinning practice with an evidence base; the first highlighted the need to establish the best methods to use in order to evaluate this practice and the second recognised the need to identify how to engage clinicians in using research evidence to support their practice.

Health promotion

Another relatively strong theme (20%, ranks 5, 7, 8, 20) was the role of the physiotherapist in prevention of disease and health promotion. Specific areas of need were identified as childhood obesity, falls in the elderly, bone health and osteoporosis. In terms of treatment approaches, the role of exercise (and how best to optimise exercise) was specified as one that needed to be explored for the prevention of chronic disease. The physiotherapy expert panel also recognised the specific need to evaluate the role of physiotherapy within multidisciplinary approaches to health promotion and to consider how best to plan and implement health promotion activity by physiotherapists (rank 20).

Embedding education/research into practice

Interestingly, the top ranked priority for the physiotherapy panel focused on the importance of developing career pathways that reward further education. This links with rank 16 which identifies the need for research around how more clinical grades can be created. Specifically, they identified the need to evaluate how research capacity can be enhanced through initiatives that would protect clinical time for research and recognise research as a required component of clinical roles (rank 11). This links with the item stressing that resources were required to ensure that Irish physiotherapists were world class researchers (rank 18).

Service Organisation

Two items related to service organisation were in the top 20 ranked statements (ranks 2, 14). The effectiveness of primary care teams in preventing secondary admission was equal ranked second, along with the need to evaluate practice. At rank 14, the issue of researching the most cost effective interventions was highlighted.

Time Frame

The timeframe for most of the top 20 priorities was medium term, that is, the research should be commenced within the next 12 months. Those that were deemed to be short term (undertaken immediately) were rank 2, identifying the effectiveness of interventions for chronic disease, joint rank 2, evaluation of primary care teams, rank 7, investigating the role of exercise in obesity and rank 11, research into the best ways to develop research capacity in the physiotherapy profession.

4.2.6 Discussion of the Physiotherapy Research Priorities

Physiotherapists have identified not only the need to establish the evidence for a range of interventions used in practice, but also the need to translate these findings into practice by training clinicians in the application of best evidence. The Chartered Society of Physiotherapy has also identified that clinicians need skills to use evidence in practice (chartingthefuture@csp.org.uk) and recent health policy in Ireland and the UK emphasised the importance of research to health and well-being (DH, 2006; DoHC, 2001a & 2006). Tied with the need for further research is a strong theme concerning how will this research can be undertaken in a busy health service, and the need therefore to make research more of a priority. Indeed, physiotherapists recognise the need to develop career pathways that reward further education. More specifically they identified the need to evaluate how research capacity can be enhanced by initiatives that would protect clinical time for research, and create grades for staff with these enhanced skills. This shift to the recognition of research as a core component of clinical roles fits well with recent developments in Ireland outlined in the Advisory Council for Science, Technology and Innovation Review '*Towards Better Health: Achieving a Step Change in Health Research Ireland' (Forfas, 2006)* around enhancing clinical career pathways for medicine and other clinical groups. This is mirrored internationally by similar reports for medicine and dentistry (UKCRC 2005), nursing (UKCRC 2007) and the allied health professions (DH 2008a) in the UK and America (US DHHS 2008).

Physiotherapists were primarily concerned about investigating the effectiveness of treatment approaches commonly used in practice. Although one item did identify the need to compare conservative approaches to innovative techniques, questions related to specific innovative techniques, such as virtual reality, were just below the level of consensus at round 3. This is interesting given policy shifts to increase the amount of technology used in health care (Commission of the European Communities, 2007). Physiotherapists are ideally placed to drive forward some of these innovations in health care, particularly with respect to developing exercise and physical activity programmes that patients can access remotely from home.

Another very interesting theme that emerged is that of the prevention of disease and health promotion. Several of the research priorities identified by the physiotherapy panel are consistent with the current policy of shifting healthcare away from the hospital setting to the community in Ireland, North and South, (DHSSPSNI, 2004; [Mant report] HRB 2006). They are also reflective of the need to reduce reliance from a medical disease model to a health model based relating to the prevention of disease and greater personal responsibility for health in Ireland (DoHC, 2001a; 2006). Indeed four of the top twenty priorities deal with the role of the physiotherapist in health promotion. The highlighted areas under this theme and under the evaluation theme are consistent with those indentified as high priority in reports from the Irish government and the governments of other developed countries. These include addressing obesity, older adult care (especially stroke), chronic disease care including respiratory disease and intensive care, and bone health (HSE, 2008; DoHC, 2008c, DoHC, 2009-Ireland; Donaldson & Banatlava, 2007-Europe; US DHHS 2009-America; DH 2009b-UK). Although Irish policy documents identify the importance for all health professionals in health promotion and disease prevention (DoHc, 2008b) there is currently no professional specific strategy for physiotherapy. In contrast, in the UK the increasing role of physiotherapy in health promotion, especially exercise prescription, has been identified by the Chartered Society of Physiotherapy in their 'Charting the Future' project. This aims to ensure that the physiotherapy profession is fully equipped to meet future healthcare needs (chartingthefuture@csp.org.uk). The priorities also highlight the need to identify the role of the physiotherapist in the healthcare team and reflect well the drive towards combined services and teams that deliver in Ireland (HRB, 2006).

Comparison with other physiotherapy research priority studies

Unlike occupational therapy there are no recent reports in the physiotherapy literature on the identification of research priorities to which the current results can be compared. The last major research priority exercise was published by the CSP in 2002, and unlike the current study, it identified separate specialist panels. It was beyond the remit of the present study to have more than one physiotherapy panel. However, the advantages of the this study are that we can compare research priorities across the six professional groups, along with those of stakeholders and service users.

Comparison to service user priorities and Key Stakeholder Priorities

A key difference in the priorities for the key stakeholder panel and the physiotherapy panel was the number of specific items that related to practice evaluation in the latter. Physiotherapists identified more statements (50% versus 25%) that related to their day to day practice. This mainly focused on identifying the evidence base for commonly used treatments. Physiotherapists also identified the importance of health promotion and disease prevention, which were not prioritised by the key stakeholders.

Both physiotherapists and key stakeholders identified that the development of research capacity was a priority. In addition, key stakeholders (rank 9) were interested in how to implement research into practice in terms of service models of healthcare e.g. '*devise mechanisms to ensure that practitioners adhere to best practice models'.*

There was some congruence between the key stakeholders and the service users in terms of the importance of involving patients in their healthcare. Certainly, the former group seemed to be more aware of the policy shift to focus care around the patient and this was also identified as important by the service users. However, this item was not identified as a priority by the physiotherapy panel.

There was some overlap between the panels in terms of those specific areas of practice that are of priority e.g. obesity, older adults and chronic disease. It is also worth noting that the service users also identified cancer care, mental health and diabetes as a priority, although this is not reflected in the physiotherapy specific items.

4.3 Occupational Therapy

4.3.1 Response Rates

Out of the 39 occupational therapists who responded to Round 1; 87% (n=34) responded to Round 2; 47% (n=16) responded to Round 3.

4.3.2 Demographic Profile

Most respondents (94.9%) were female. Most (41%) were aged between 25-34 years, 30.8% were aged between 35-44 years, 17.9% were aged between 45-54 years and 10.3% were aged between 55-65 years. In terms of years' experience since qualifying, those with 6-10 years were the largest group (28.5%), followed by 16-20 years (20.5%), 1-5 years (15.4%), 21-25 years (12.8%), 26–30 years (7.7%) and 36+ years (5.1%).

4.3.3 Research Priorities

Table 11 shows the top twenty priority items identified at round 3 by the occupational therapy panel. None of the items received a consensus level of 100%.

Table 11: Top Twenty Research Priorities Identified by Occupational Therapy Panel

RESEARCH PRIORITY	Mean	Con Level	Rank	Time frame
Develop pre and post tools and measures to test specifically for changes in occupational performance as a result of occupational therapy intervention.	4.50	91.2%	**1**	Short
Evaluate the quantitative evidence for the effectiveness and efficacy of a variety of occupation based occupational therapy interventions and outcomes.	4.47	88.3%	**2**	Short
Identify the ways in which occupational therapy interventions assist in keeping elders home longer, e.g. improved mobility.	4.44	94.2%	**3**	Short
Research into occupational factors that promote health and well-being across a diverse range of areas (e.g. obesity prevention; mental health and well-being).	4.35	85.3%	**4 (joint)**	Short
Seek qualitative evidence for the efficacy of a variety of interventions.	4.35	85.3%	**4 (joint)**	Short
Investigate the cost effectiveness of OT intervention in community care for dementia.	4.29	88.3%	**6**	Short
Investigate the perceptions and experiences of service users regarding the effectiveness of multidisciplinary working.	4.29	85.3%	**7**	Short
Investigate the cost effectiveness of therapies professions in facilitating early discharge.	4.26	85.3%	**8**	Medium
Investigate the link between meaningful occupation, health and well-being.	4.26	82.3%	**9**	Short
Investigate the impact of occupation on positive ageing.	4.24	85.3%	**10 (joint)**	Short
Assess the effectiveness of vocational rehabilitation generally (including mental health)	4.24	85.3%	**10 (joint)**	Medium
Develop systems to monitor and track success factors for independent living and falls prevention (including the elderly population and those with dementia)	4.21	79.4%	**12**	Short
Research the evidence base for a variety of rehabilitation treatments in acute paediatrics e.g. CVA, encephalitis, splinting, seating equipment, teamwork.	4.18	79.4%	**13 (joint)**	Short
Qualitative, experiential studies of service users' experiences of receiving occupational therapy.	4.18	79.4%	**13 (joint)**	Short
Research the impact of environmental intervention on occupation.	4.12	73.6%	**15**	Medium
Investigate the scope of occupational therapy in emerging areas of practice: prisons, housing planning, schools and pre-schools, neonatology.	4.09	79.5%	**16**	Medium
Research ways to increase and apply evidence based practice, including case studies and skills usage.	4.09	73.5%	**17**	Medium
Identify occupationally based, clinical assessment and outcome measures, from structured to unstructured and from standardised to non-standardised.	4.06	76.5%	**18**	Medium
Research best methods to enhance multidisciplinary assessments and interventions including reviews	4.05	73.7%	**19**	Medium
Identify the potential health promoting properties of participation in occupation in well / healthy populations.	4.03	73.5%	**20**	Short

4.3.4 Key Themes for Occupational Therapy Panel

Five key themes were identified; evaluating occupation-based interventions and techniques, health promotion, cost effectiveness, experience of service users, and environmental intervention.

Evaluating occupation-based interventions and techniques

As with other professional panels, such as physiotherapy and podiatry, most (50%, ranks 1, 2, 3, 10, 12, 13, 16, 17, 18, 19) of the top ranked items highlighted the need to evaluate interventions and techniques used in clinical practice. However, unlike the other professional panels, the focus was clearly on occupation-based interventions and techniques, as indicated by the use of specific occupational therapy terminology such as "occupational performance" (rank 1), "meaningful occupation" (rank 9) and "occupationally based" (rank 18). Where these were specifically identified, the focus was on dementia (ranks 6, 12), vocational rehabilitation (rank 10), cardio-vascular accident (CVA), encephalitis (rank 13), and the perceptions and experiences of service users regarding the effectiveness of multidisciplinary working (rank 7). Specific techniques that were identified include splinting and seating (rank 13). The need to investigate the scope of occupational therapy in emerging areas of practice (such as prisons, house planning, schools and pre-schools, and neonatology) was highlighted (rank 16). In general, the panel rated the need to seek quantitative evidence (rank 2) of effectiveness slightly higher than qualitative evidence (rank 4). As with the physiotherapy panel, there was a statement about researching ways to increase and apply evidence based practice (rank 17).

Health Promotion

Again, similar to the other professional panels, another strong theme (20%, ranks 4, 9, 10, 20) was the promotion of health and well-being across a diverse range of areas. Specific areas of need were identified as the occupational factors relating to obesity prevention, mental health and positive ageing. In terms of treatment approaches, participation in occupation was highlighted as a factor that needed to be explored for the promotion of health and well being. This focus on health promotion resonates with the current policies in both the UK and Ireland to shift healthcare from the hospital setting to the community (DHSSPSNI, 2004; [Mant report], HRB 2006) and to move the emphasis away from the medical model towards a health model based on the prevention of disease and personal responsibility for health (DoHC, 2001a; 2006). As with physiotherapy, these priorities are consistent with some of the health conditions indentified as high priority in reports from the government in Ireland and other developed countries such as obesity and chronic disease (Donaldson & Banatlava, 2007; HSE, 2008; DoHC, 2008c; US DHHS 2009 b,c,d; DoHC, 2009).

Cost Effectiveness

Investigating the cost effectiveness of occupational therapy intervention (10%, ranks 6, 12) ranked in the top twenty with community care for dementia and facilitation of early discharge being specifically highlighted as priorities. Coincidentally, the stakeholders' panel identified cost effectiveness as its highest ranking priority and the service users' panel ranked research in dementia as its seventh highest priority.

Experience of Service Users

Evaluating the perceptions and experiences of service users (10%, 7, 13) in relation to both receiving occupational therapy and the effectiveness of multidisciplinary treatments was another highly ranked theme.

Environmental intervention

The impact of environmental intervention on occupation (5%, 15) was a theme that made it into the top twenty ranking priorities.

Timeframes

Most (13) of the top twenty priorities were identified as 'short term', that is, research should be commenced out immediately. The remaining seven priorities were identified as 'medium', that is they should be commenced within the next 12 months.

4.3.5 Discussion of the Occupational Therapy Priorities

The top twenty research priorities for occupational therapists in Ireland generally reflect those identified in earlier international studies. These include providing evidence for the clinical effectiveness and cost effectiveness of occupation-based and environmental interventions, and the influence of occupation on health and well being. However, the AOTA/AOTF Research Advisory Panel (American Occupational Therapy Foundation, 2003) concluded that the research priorities that had been identified in their 1999 study were not framed in language that was meaningful or that allowed occupational therapists to be well-aligned with the research priorities of federal funding agencies, such as the National Institutes of Health, Centers for Disease Control, National Science Foundation, or the National Institute for Occupational Safety and Health.

Likewise, the 2005 POTTER study (Bannigan *et al.* 2006) suggested that research priorities identified by occupational therapists do not always correlate with government priorities for research. This study did not set out to identify specific research questions but, rather, to highlight key areas in which research activity for occupational therapy should be focused. However, as Duncan *et al*. (2003) previously remarked, such broad-based national priorities for occupational therapy do not provide very specific guidelines for any particular area of practice. More recently, Bannigan *et al.* (2009) argued that the priority statements may be too broad and non-specific to be useful in any effective targeting of government funds. Furthermore, they warn that new and emerging areas of research may not be captured by research priority setting exercises.

Bannigan *et al.* (2009) proposed that a criteria-based approach to research prioritisation may be the way forward, with services managers engaging in this activity and that research capacity building is essential to develop allied health professionals as research consumers, research participants and research leaders.

It would seem from Table 11 that, as in previous studies, the occupational therapy panel have focused mainly on research priorities that are important and meaningful to them as individual practitioners although two of the priorities (7, 19) address multidisciplinary issues. Likewise, it would seem that the panel have not specifically considered government priority areas for research; in other words there would appear to be a mismatch between what occupational therapists see as research priorities and that perceived by research funders.

Comparison with other Occupational Therapy Research Priority Studies

When Fowler-Davis and Bannigan (2000) explored research priorities in mental health in 1999, the involvement of service users in research was identified as a low priority. However, it was in the top three when occupational therapists for mental health were surveyed again in 2001 and was the second priority in the POTTER project. In the current study, service user involvement in research was ranked seventh and thirteenth highest priorities.

In 2001, the emerging science of occupation was identified as a priority for research (Ilott & White, 2001) but does not appear in name (occupational science) in the current study. Nonetheless, it could be argued that elements of it can be seen in the focus on investigating links between meaningful occupation, health and well being (ranks 9, 20). The POTTER project identified 'effectiveness of occupational therapy for people with mental health problems' as the fourth highest priority. In the current study, research on mental health was also identified as a high priority for occupational therapists (ranks 4, 6, 10, 12,).

The AOTA/AOTF consensus conference (American Occupational Therapy Foundation, 2003) identified the use of standardised assessments and outcome measures as a priority while the POTTER project (Bannigan *et al.* 2006) ranked "Developing new valid and reliable outcome measures for use in occupational therapy" in eighth place. In the current study the occupational therapy panel ranks the development of outcome measures as its highest priority (rank 1).

Previous studies do not appear to have identified research on older people but in the current study "keeping elders at home" (rank 3), "intervention for community care for dementia" (rank 6), "the impact of occupation on positive ageing" (rank 10) and "falls prevention" including those with dementia (rank 12) have emerged as priorities.

Comparison to Service User Priorities and Key Stakeholder Priorities

Cost effectiveness of interventions was ranked sixth and eighth by the occupational therapy panel while the key stakeholders' panel identified this as its highest ranking priority (rank 1). Team working was also rated highly (rank 5) by the key stakeholders panel and the occupational therapy panel ranked "effectiveness of multidisciplinary working" (as perceived and experienced by service users) as its seventh highest ranking priority. Most of the items in the top twenty priorities for the key stakeholders' panel related to issues around service organisation but this was not identified as a priority by the occupational therapy panel.

Occupational therapists identified more statements (50% versus 25%) relating to their day to day practice, in terms of identifying the evidence base for commonly used treatments. They also identified the importance of health promotion which was not identified by the key stakeholders.

Both key stakeholders (ranks 6, 18) and the service users ranked in their top twenty the importance of involving patients in their own healthcare. Likewise the occupational therapy panel ranked involvement of service users in research highly (7, 13).

There was some overlap between the panels with regard to specific areas of practice that are of priority e.g. obesity and mental health. In particular, research into dementia was ranked sixth and twelfth by the occupational therapy panel while the service user panel ranked this as its seventh highest priority. However, it should be noted that some areas of practice identified by service users did not feature as a priority for occupational therapy e.g. cancer and diabetes.

4.4 Nutrition and Dietetics

4.4.1 Response Rates

Out of the 39 dietitians who responded to round one; 30 (76%) responded to round two; and 21 (70%) to round three.

4.4.2 Demographic Profile

Only one member of the nutrition and dietetics panel was male (2.6%) and 38 were female (97.4%). Seventeen members of the panel (43.6%) were aged between 34-44 years of age. Twelve panel members were aged between 25-34 years (30.8%); seven were aged between 45-54 years of age (17.9%) and three were aged 55-65 years (7.7%). Twelve members of the panel had been 11-15 years professional experience (n=12; 30.8%) while only two had between 1-5 years experience (5.1%) and two members had over 36 years experience (5.1%).

4.4.3 Research Priorities

Table 12 shows the top twenty priority items identified at round 3 by the nutrition and dietetics panel. None of the items received a consensus level of 100%.

Table 12: Top Twenty Research Priorities Identified by Nutrition and Dietetics Panel

RESEARCH PRIORITY	Mean	Con Level	Rank	Time frame
Develop and evaluate evidence based targeted strategies, incorporating a variety of methodologies, for the prevention and treatment of obesity across the lifecycle with particular emphasis on childhood obesity.	4.40	86.7%	**1**	Short
Develop outcome measures in relation to the impact of nutrition support / dietetic intervention.	4.23	80.0%	**2**	Medium
Evaluate the effectiveness of models and programmes to promote healthy eating in Primary schools, e.g. Health Promoting Schools, Much and Crunch, in terms of their self-sustaining qualities and positive outcomes.	4.13	83.4%	**3**	Medium
Provide a scientific, robust evidence base and guidelines for best practice that are disease-specific and related to clinical specialties.	4.13	70.0%	**4**	Medium
Audit of home enteral feeding services and the transition from hospital to community care.	4.10	76.7%	**5 (joint)**	Medium
A comparative evaluation of existing programmes for improving dietary compliance in Type 2 diabetes e.g. Desmond, Xpert and Code.	4.10	76.7%	**5 (joint)**	Short
Develop and evaluate nutrition education programmes on infant feeding practices and weaning in different groups.	4.10	76.7%	**5 (joint)**	Short
Identify methods of encouraging breastfeeding rates in Ireland: psychological, societal, marketing approaches, work-practice amendments.	4.07	76.7%	**8**	Short
Vitamin D status and requirements across the lifecycle	4.07	73.3%	**9**	Medium
Evaluate effectiveness of dietitian participation in early intervention / child development teams for the improvement of clinical outcomes for clients with disabilities.	4.03	83.3%	**10**	Medium
Evaluate the efficacy of therapeutic diets	4.03	76.7%	**11**	Medium
Explore the scope and extended role of the dietitian in clinical care e.g. changing enteral tubes; passing Ng tubes; prescribing various foods, supplements and drugs.	4.03	73.4%	**12**	Short
Research the most effective ways to support autonomous, self-	4.00	73.3%	**13**	Medium

RESEARCH PRIORITY	Mean	Con Level	Rank	Time frame
managing patients with chronic diseases.				
Research motivation and behaviour change with regard to nutritional and dietary health.	3.97	80.0%	**14**	Medium
Research the role of the dietitian in the management of eating disorders across care sectors.	3.97	73.3%	**15**	Medium
Compare the effects of dietary therapy versus supplementation in nutritionally depleted patients.	3.93	73.3%	**16 (joint)**	Medium
Evaluate effectiveness of a variety of educational / teaching methods and group-work strategies for dietary advice and develop evidence based models from outcomes.	3.93	73.3%	**16 (joint)**	Medium
Develop a database of patients receiving nutritional support through enteral / parenteral feeding at home (e.g. the BANS data).	3.93	73.3%	**16 (joint)**	Short
Evaluate student training in terms of current shortfalls and how to address them.	3.93	70%	**19 (joint)**	Medium
Evaluate the range of training courses available in nutrition e.g. FETAC – in terms of competencies acquired and course regulation.	3.93	70%	**19 (joint)**	Short

4.4.4 Key Themes for the Nutrition and Dietetics Panel

From the top twenty priorities, six key themes were identified; obesity, nutrition support, health promotion, evidence based practice, disease specific research and clinical academic training.

Obesity

The prevention and treatment of obesity was, not surprisingly, found to be the top ranked priority for nutrition and dietetics. Childhood obesity was highlighted as area of particular concern (rank 1) and linked to this the panel identified a number of directly / indirectly related priorities including initiatives to enhance rates of breastfeeding rates in Ireland (rank 8), strategies to promote healthy eating in childhood (rank 3) and the development and evaluation of nutrition education programmes on infant feeding practices (rank 5).

Nutrition support

Nutrition support emerged as a strong theme (20%, ranks 2, 12 and 16). Topics that were included in the top twenty were the need to examine the impact of nutrition support on patient outcomes generally and the transition of nutrition support services from hospital to community. An additional aspect related to the provision of nutrition support was the need to evaluate the scope and extended role of the dietitian in the practical aspects related to providing of nutrition support which is most likely reflecting the shift from hospital based treatment to primary care

Health promotion

Similar to the findings reported for the other professions health promotion was a major theme and featured in a number of the top priorities (15%, ranks 5, 3 and 8). In particular, the evaluation of ongoing health promoting nutrition related strategies was identified as being important as well as the development of new strategies to tackle issues of major concern such as obesity and infant feeding.

Evidence based practice

This theme permeated almost all of the top ranked priorities (ranks 1, 2, 4, 5, 10, 11, 12, 13, 15, 16) and highlights the need for well conducted research to inform and develop practice. Similar to the other professions, intervention studies were recognised as an important means of providing robust evidence in a number of the top priorities (ranks 1, 9, 10, 16). These were wide ranging and included health promotion interventions as well as nutrition interventions. While the cost effectiveness of running interventions was not considered by the nutrition and dietetics panel, the key stakeholders identified this as a top priority (rank 1). Other research methods identified by the nutrition and dietetics panel as being important ways of generating evidence included audit (rank 5) and evaluations of current practice. The question as to whether the population are meeting their Vitamin D requirements was also considered a priority by the panel and where further evidence was needed. In their panel, service users also recognised the value of evidence based practice. They identified the importance of determining the effectiveness of various interventions to improve care for people with diabetes as one of their top priorities.

Disease specific research

Disease specific research (ranks 1, 4) was included as a priority and this included obesity and diabetes related research (which was also highlighted by service users). The need for disease specific guidelines that were related to clinical specialities achieved a high ranking (rank 4). In relation to clients with disabilities, evidence to evaluate the benefit of dietetic participation on clinical outcomes in child development teams was also recognised as being very important (rank 10).

Clinical academic training

The importance of post-registration training was recognised by the profession as a priority (rank 19). Additional comments received from the panel which were not considered to be research priorities but which do need to be highlighted included recommendations to create dietetics research posts and to facilitate protected research time. There was also a call for access to further research training at various levels. Linked to this theme was the need to evaluate current practice in relation to student training.

Timeframes

Seven research priorities were identified as having a short-term timeframe and the remainders were considered by the panel to be medium-term priorities. Interestingly none of the priorities were identified as long-term.

4.4.5 Discussion of the Nutrition and Dietetics Priorities

The top research priority identified by the nutrition and dietetics panel was the treatment and prevention of obesity. This is not surprising given the current high prevalence of overweight and obesity in the Irish population, mirroring the global obesity epidemic. Self reported rates for overweight / obesity in Irish adults (18-65+ yrs) were 36% and 14% respectively in 2007 (DoCH, 2008d). The Irish Universities Nutrition Alliance (IUNA, 2001) reported data based on *measured* weight and height and estimated a 38% prevalence of overweight and 23% of obesity. The prevention and management of obesity is of major concern to governments worldwide and has been the subject of a number of national and international health strategy documents as indicated in Chapter 1, Table 2**.**

In 2005 a report by the Department of Health and Children (National Taskforce on Obesity (NTFO)) outlined a multi-sectoral approach, which included 93 recommendations, aimed at providing the

policy framework for addressing the high and increasing prevalence of obesity in the Irish population (DoHC, 2005). In a 2009 review of the implementation of these recommendations it was reported that significant progress had been made in the case of only 30 of the recommendations although some progress was reported in an additional 55 (DoHC, 2009). Thirteen of the original recommendations were aimed specifically at the health sector with many requiring dietetic input. Indeed in the health sector category, 2 of the 5 recommendations in which significant progress has been reported, included specialised training for dietitians and the implementation of a number of initiatives to support the population in healthy eating and active living.

The American Dietetic Association also identified the prevention and treatment of obesity (and other chronic diseases) as a top research priority for dietitians in the US in 2004. Interestingly, and similar to our findings, they identified the need to examine the effectiveness of methods, programmes and strategies for the prevention of obesity (Castellanos *et al.*, 2004) as a key aspect. The incorporation of a wide variety of methodologies to tackle the obesity problem was included in our top priority. One of the main target groups identified in the current report was children who have reported rates of obesity of 9% in boys and 13% in girls (IUNA, 2005). Evidence based practice in relation to obesity management is also a key priority for the British Dietetic Association, the UK's professional body for registered dietitians. They recognise the need for '*a professional commitment by Dietitians to research*' to identify '*effective evidence based strategies in the management of obesity'* (Dobson, 2008). In the current study, the time frame linked to this priority was 'short' which is somewhat surprising given the complex and multifactorial nature of obesity but nevertheless emphasises the importance and urgency that dietitians associate with the problem.

Other areas related to obesity ranked in the top 20 were the need to evaluate health promotion strategies aimed at promoting healthy eating in primary schools and the need to develop and evaluate nutrition education programmes on infant feeding practices and weaning. Methods of encouraging breastfeeding were also identified. This is linked to one of the recommendations made by the NTFO stating that mothers who chose to breastfeed, and especially those who wished to feed exclusively for 6 months should be supported antenatally (DoHC, 2005).

The importance of evidence based practice is a strong theme running through many of the top 20 priorities. In addition to the health promotion strategies listed above, the evaluation of disease specific programmes, particularly programmes aimed at improving dietary compliance in diabetes, have been identified as a priority with a short time frame. Interestingly, this was also identified by service users as a top priority; they ranked the need to evaluate the effectiveness of a range of interventions to improve care for people with diabetes as being of major importance. Issues related to the management and treatment of diabetes, have also been highlighted in the current report by some of the other professions, particularly podiatry. Although not specifically highlighted by the ADA as a top research priority, the importance of preventing obesity related chronic diseases, such as diabetes in the US has been recognised by the profession (Castellanos *et al.*, 2004). Further, in 2008 the ADA published evidence based nutrition practice guidelines for diabetes and scope and standards of practice (Franz *et al.*, 2008). The recognition of the importance of access to a robust scientific evidence base is not confined to diabetes alone. Evidence and guidelines that are disease specific and related to clinical specialities are ranked as the fourth most important priority by the nutrition and dietetics panel.

In relation to the primary prevention of disease one area of research that was identified and associated with a medium time frame was establishing vitamin D requirements across the lifecycle. This is an important priority given that vitamin D is the major regulator of calcium metabolism and thus a very important determinant of bone health (Chapuy and Meunier, 1997). A number of studies

have reported on suboptimal vitamin D status in the Irish population (Andersen et al, 2003; Hill et al, 2002) and furthermore it has been reported that a significant number of Irish adults have low vitamin D intakes (Hill et al , 2004). The ADA also makes reference to the importance of identifying key biomarkers to reflect both nutritional status and dietary intake in their list of research priorities (Castellanos *et al*., 2004).

Aspects related to the provision of nutrition support emerged as a strong theme with 3 of the top 10 rated priorities concerned with this important aspect of dietetics practice. The development of outcome measures to examine the effectiveness of nutrition support was ranked as the second most important priority requiring research in the medium term. The absence of robust evidence based guidelines for nutrition support has been highlighted in two major International reports. In the National Institute for Health and Clinical Excellence guidelines on oral nutrition support only 10% of a total of 77 recommendations made were considered to be of grade A evidence (National Institute for Health and Clinical Excellence, 2006). A similar finding was reported by The European Society for Clinical Nutrition and Metabolism in 2006 (Schutz *et al.* 2006). In both cases most of the recommendations were based on expert opinion. The need for '*evidence to evaluate nutrition support provision in the community and the transition from hospital to the community'* highlights the need for good quality research to enhance the evidence base in primary care. This was identified in the Mant report (HRB 2006) as key to the continued practice and professional development of the therapy professions in Ireland.

A need to evaluate the role of the dietitian in the management of eating disorders, an area that is highly specialist, was recognised as an important priority as was research involving clients with disabilities. In particular, the need to evaluate the role of the dietitian in child development / early intervention teams was identified as the key priority. An evaluation of the importance of early intervention was also recognised by the speech and language therapy panel as a key priority. Interestingly, disability focused research was not explicitly highlighted by many of the panels (including service users), although indirectly many of the priorities identified across the panels have the potential to influence services / treatments for those with disabilities.

The importance of further training and education was clearly identified. Access to post-registration training was identified as one of the top 20 priorities (rank 19) and a number of responses were received that would not be considered research priorities but are fundamental to enable good quality research to be undertaken. These included recommendations to create dietetics research posts and to facilitate protected research time. There was also a call for access to further research training at various levels.

Comparison to Service User priorities and Key Stakeholder Priorities

Like many of the other professions the priorities identified by the nutrition and dietetics panel, which were primarily related to practice evaluation, differed significantly to those identified by the key stakeholder panel. Nonetheless, as with the key stakeholder and physiotherapy panels the importance of access to training and research was recognised as a priority by the dietetics panel.

Interestingly both the dietetics panel and the service user panel highlighted the need to evaluate different approaches in relation to the management of chronic diseases. Areas of practice that were highlighted by both dietetics and service users as being important included mental health and diabetes. Similar to the other therapy professions, health promotion featured strongly in the priorities identified by the dietetics panel while service organisation and cost-effectiveness were not specifically identified as priority areas.

4.5 Speech and Language Therapy

4.5.1 Response Rate

Out of the 41 speech and language therapists who responded to Round 1, 73% (n=30) responded to Round 2 and 67% (n=20) responded to Round 3.

4.5.2 Demographic Profile

At round 1 the speech and language therapy panel were made up of 18 academics and 33 clinicians. Of the panel, 3 were male (7%) and 38 were female (93%). This reflects the speech and language therapy workforce, which is predominantly female. Most of the panel were in the 25-34 age group (n=15; 37%). The 55-65 age group had the smallest number (n=5; 12%). There were 12 members in the 35-44 age group (29%) and nine members in the 45-54 age group (22%). The largest number of the panel had between 6-10 years experience (n=12; 29%) and the smallest number had 11-15 years experience (2; 5%). Only 4 had 1-5 years experience (10%) and five members had 31-35 years experience (12%). In total 16 members (39%) had 10 years or less experience; six had 16-20 years experience (15%), four had 21-25 years experience and four had 26-30 years experience (10%).

4.5.3 Research Priorities

Table 13 shows the top twenty priority items at round 3. None of the items received a consensus level of 100%. In addition, none of the items in the top twenty had a long term time frame.

Table 13: Top Twenty Research Priorities identified by Speech and Language Panel

RESEARCH PRIORITY	Mean	Con Level	Rank	Time frame
Investigate ways to develop infrastructural support for research capacity building to facilitate small scale, service based research.	4.47	90.0%	**1**	Short
Longitudinal outcome studies to investigate effects of therapy interventions for children and adolescents e.g. functioning / school progress / coping in later life.	4.43	90.0%	**2**	Medium
Determine best practice and outcome measures for severe phonological disorders and receptive / expressive language disorder.	4.40	93.3%	**3**	Short
Provide evidence for best practice with specific client groups at specific developmental periods across the lifespan e.g. D.S. early intervention, ASD pre-school, voice and motor speech disorders etc.	4.40	90.0%	**4**	Short
Develop robust (valid and reliable) outcome measures to evaluate efficacy / effectiveness of a range of therapy interventions for all age groups and conditions.	4.40	86.6%	**5**	Short
Investigate optimal amounts and types of therapy for designated conditions to inform the establishment of priorities and effective service delivery models.	4.40	83.4%	**6**	Medium
Evaluate early intervention for clients with disabilities in terms of long term outcomes.	4.40	83.4%	**7**	Medium
Seek precise indicators to inform the selection of therapy interventions for clients with specific conditions.	4.33	83.3%	**8**	Short

RESEARCH PRIORITY	Mean	Con Level	Rank	Time frame
Research on effects of indirect interventions e.g. training clients' parents, carers and teachers.	4.30	93.3%	**9**	Short
Investigate the views of individuals with communication impairments in all aspects of the research process.	4.30	83.3%	**10**	Short
Evaluate the therapy efficacy of various commercially available tools e.g. Talk Tools, Lámh.	4.27	83.3%	**11**	Medium
Investigate and devise effective and efficient models of service delivery for a variety of settings, client groups and populations e.g. schools, acute care, special needs, priority SES (Socio-economic Scale) groups, diverse cultural and linguistic groups, refugees.	4.23	80.0%	**12**	Medium
Investigate speech and language therapy service provision in Ireland in terms of identified needs of service users and the extent to which they are met.	4.23	76.7%	**13**	Short
Epidemiological research on the incidence and prevalence of communication and swallowing disorders in Ireland, across various age groups and living arrangements e.g. children in foster care.	4.20	83.3%	**14** (joint)	Short
Develop qualitative and quantitative outcome measures across client groups.	4.20	83.3%	**14** (joint)	Medium
Conduct research that seeks the views of clients / carers with regard to experiences of living with communication and swallowing difficulties.	4.20	80.0%	**16** (joint)	Medium
Conduct research that seeks the views of clients / carers with regard to experiences of speech and language therapy and service delivery, from assessment and intervention through to discharge.	4.20	80.0%	**16** (joint)	Medium
Research effectiveness and 'best model' of speech and language therapy interventions at second level education: 12+ years.	4.17	83.3%	**18** (joint)	Medium
Identify how children with Specific Language Impairment should be supported in order to reach their maximum potential in the secondary school system.	4.17	83.3%	**18** (joint)	Medium
Research the effectiveness of the language class (A dedicated, small mainstream class for children with Specific Language Impairment with a teacher and SLT working with 7 children).	4.17	83.3%	**18** (joint)	Medium

4.5.4 Key Themes for Speech and Language Therapy

From the top twenty priorities five key themes were identified; evaluating therapy interventions, health promotion, support for research, experience of service users and service delivery.

Evaluating Therapy Interventions

Most items focused on evaluating therapy interventions, (50% items 2, 3, 4, 5, 6, 7, 8, 9, 11 and 18). Items 3, 5 and 15 highlight the development of outcome measures specifically. Children and adolescents are specified in item number 2 and children 12+ are specified in item 18. All age groups are considered in items number 4 and 5. Long term evaluation is suggested in 2 of the items (2 and

7). Severe phonological disorders and receptive/ expressive language disorders were areas of practice mentioned specifically in priority number 3. Down's syndrome, autistic spectrum disorder, voice and motor disorders were highlighted in priority number 4. Special needs are addressed in number 12 and Specific Language Impairment is the focus of items 19 and 20.

Health Promotion

As with several of the other therapy professions, health promotion was a permeating theme. It emerged in 10% of the priorities (items 7 and 9). Evaluating early intervention and the training of carers and teachers were rated as particularly important.

Support for Research

Research priority number 1 highlights the need to investigate ways to develop infrastructural support for research capacity. Again, this was an issue raised by other therapy panels.

Experience of Service Users

Investigating the experience of service users in all aspects of the research process is recommended in item number 10. This theme is picked up again in item 16, where investigating the views of clients and carers living with communication and swallowing difficulties is recommended and in item number 17 which focuses more broadly on the experience of service delivery.

Service delivery

Four of the items focussed on service delivery (6, 12, 13 and 17). Items 13 and 16 investigated the views of service users on service delivery. All four items dealt with broad areas of clinical practice.

Timeframes

Nine of the twenty identified research priorities were considered to be short-term priorities (ranks 1, 3, 4, 5, 8, 9, 10, 13 & 14), that is, research should be commenced immediately. The remaining eleven research priorities were considered to be medium-term priorities (ranks 2, 6, 7, 11, 12, 14, 20), that is they should be commenced within the next 12 months.

4.5.5 Discussion on the Speech and Language Priorities

This study has identified research priorities that are consistent with previous research and reports in the field. The Royal College of Speech and Language Therapists have published a recent research strategy document (2009) for the UK. The Irish Association of Speech and Language Therapists (IASLT) hold common views with the RCSLT. They seek to encourage evidence based practice by promoting research activity within the profession. The evaluation of interventions is seen as a priority in the profession but requires more direction from research. This was a common theme in the top twenty priorities.
The Research for Patient Benefit Working Party (2004) recommended partnership between government, the voluntary sector, patients and industry to watch over clinical research in the UK. This appears in research priority number 10, 16 and 17; suggesting including the views of individuals with communication impairments in the research process.

Children and young people are a common age group identified throughout the priorities. The IASLT published a position paper in October 2007 outlining the definition, service provision and recommendations for change for children with specific speech and language impairment. The IASLT state that they share the view of the RCSLT in the care pathways and service provision for this group. It recognises the need for the long term nature of the diagnosis to be considered in the continuum of

care provided, to include secondary school education. This is in line with research priority 18 (joint). The Bercow Report (Bercow, 2008) made recommendations about improving services for children and young people with speech, language and communication needs and their families in the UK. This is reflected in the top twenty priorities as children and young people are included in eighteen of the priorities. However, parents are considered in priority number 9. Early intervention was a key recommendation from the review and features in research priority number 7. Also highlighted in this report is the importance of joint working. Interestingly in the speech and language panel this theme is not picked up until item number 42, reaching a consensus level of 70%. This is surprising considering the importance the discipline places on multidisciplinary working.

The *Best Research for Best Health* document (DH, 2006) recognised the importance of improving research skills within the health and social care system in the UK. Speech and language therapists also see this as important and the development of a support structure for research is rated as priority 1. It is however surprising that the top priority highlights the need to support small scale research! The impact of such small scale research is questionable but could be carried out as 'training wheels' for future large scale research projects.

Lindsay *et al.* (2002) investigated speech and language services to England and Wales and found that bilingualism services were very limited in Wales and this had issues for inclusion and equity. Interestingly, in the present study bilingualism is mentioned in priority number 35, with a mean of 3.97 and a consensus level of 76.7%.

Specific commercial therapy tools are highlighted in item number 11. This reflects Bowen (2005) view that 'Talk tools', which is a specific oral motor therapy program, lacks quality research into its effectiveness.

Comparison with other Speech Therapy Research Priority Studies

Almost three decades ago, Van Hattum (1980) investigated research priorities in speech and called for research into the whole spectrum of the communication function. In the 1990's Rice (1998) reported on the setting of research priorities for speech and language therapy; however this was more related to prioritisation for caseloads rather than research priorities. Some research priority studies exist in specialist areas of speech and language therapy. For instance, Beukelman and Ansel (1995) addressed research priorities in augmentative and alternative communication. These were identified through a research priorities workshop involving experts in the field. The priorities focused on the evaluation of augmentive and alternative communication (AAC) on the individual's communication, potential variables and developing measurement tools. Additionally, support for research capacity in the area was identified as priority number 6. AAC is identified as research priority number 31 in the present study. While this is an important area for communication therapy, it may not have made it into the top twenty specifically as it is a specialist area and not many speech and language therapists work in this area. This is one of the limitations of the study identified in a later section of this report.

Recently, Ludlow *et al.* (2008) identified research priorities in the area of spasmodic dysphonia through a multidisciplinary working group. The top priority was to further define the disorder and evaluate the risk factors. Research in this area is recommended to enhance the quality of life of patients living with this voice and speech disorder. Research priority number 4 identifies voice as an area for further investigation and looks broadly at the area of voice therapy.

Links to service users priorities and stakeholder priorities

The number 1 priority in the key stakeholder panel with 100% consensus is a cost/ benefit analysis study of therapy interventions. Interestingly, the first time that a cost/ benefit analysis is mentioned in the speech and language therapy statements is at number 74 of the priorities listing. Early intervention appears in number 3 (joint) and is also in the speech and language therapy priorities at number 7. Service users are included in the stakeholder priorities at number 6 (joint) and appear in speech and language therapy priority numbers 10, 16 and 17. Developing research capacity was the number one priority in the speech and language therapy top twenty and this is identified in number 15 and 19 in the key stakeholder priorities. Service organisation is the main theme for the key stakeholders and in the speech and language therapy priorities issues around service delivery are specified in 6, 12, 13 and 17.

In the top twenty priorities for service users, speech and language disorders are specified in priority number 12 (joint) and specifically with children. This is in agreement with the speech and language therapy priorities where children are specified more than the adult population. The top priority for this panel is reflected in the speech and language therapy number 9 priority, where supporting parents are highlighted. Communication is mentioned in 2 of the top twenty priorities, (rank 6 and 10). Most areas of practice did not feature in the top twenty speech and language therapy priorities such as mental illness, cancer, developmental coordination disorder (DCD), dementia, diabetes (this would not be an area of clinical practice in speech and language therapy), attention deficit hyperactivity disorder (ADHD) and asthma. Although developmental coordination disorder (DCD) could be included in a number of speech and language therapy priorities. Priority number 30 in the speech and language therapy panel addresses care of the elderly which could include dementia. This low priority status to diseases is at odds with the priorities identified by some of the other therapy panels. One possible explanation could be speech and language's move away from the biomedical disease model.

4.6 Podiatry

4.6.1 Response Rates

The response rates for podiatrists to the various questionnaires are as follows: 15 podiatrists responded to round 1; 87% (n=13) responded to round 2; and 76% (n=10) responded to round 3.

4.6.2 Demographic Profile

Of the 15 expert panel members in the podiatry panel, three were male (20%) and 12 were female (80%). Seven panel members (46.7%) were aged between 26-34 years, two members were aged between 35-44 years (13.3%), five were aged between 45-54 years (33.3%) and one panel member was aged over 65 years (6.7%).

In relation to the panel members' professional experience, three expert panel members had between 1-5 years experience (20%), five had between 6-10 years experience (33.3%), three had between 11-15 years experience (20%), two had between 16-20 years experience (13.3%) and one panel member had 21-25 years experience (6.7%). One panel member declined to answer the question.

4.6.3 Research Priorities

Table 14 shows the top twenty priority items at round 3. One of the items received a consensus level of 100% (Research Priority 1). Only 1 item had a long term time frame.

Table 14: Top Twenty Research Priorities identified by Podiatry Panel

RESEARCH PRIORITY	Mean	Con Level	Rank	Time frame
Research the effectiveness of podiatry in reducing below knee amputations (including foot / toe) in both types 1 and 2 diabetes.	4.46	100%	**1**	Short
Evaluate national practice standards for podiatry in Ireland.	4.46	92.3%	**2 (joint)**	Short
Identify the role of podiatry for improving quality of life and for maintenance of mobility and independence in the elderly	4.46	92.3%	**2 (joint)**	Medium
Evaluate and enhance public knowledge and awareness of the contribution and availability of podiatry services as part of the Public Health / Primary Care system.	4.46	92.3%	**4 (joint)**	Medium
Test the efficacy of podiatric nail surgery versus nail surgery performed by orthopaedic surgeons / general practitioners.	4.46	92.3%	**4 (joint)**	Medium
Determine the rate of limb amputation in Ireland, including regional variations and in relation to the availability of specialist multidisciplinary input.	4.38	84.6%	**6**	Short
Research into how the wider health professions are educated about the podiatry profession.	4.38	84.6%	**7**	Medium
Research public accessibility to podiatry services in Ireland, with special reference to podiatry for patients with diabetes.	4.31	92.3%	**8**	Medium
Evaluate the cost-effectiveness of podiatry services in terms of quantified measurement of benefits for Public Health.	4.31	84.7%	**9 (joint)**	Short
Research the most effective strategies for the multidisciplinary management of diabetes.	4.31	84.7%	**9 (joint)**	Medium
Conduct a needs assessment for podiatry services in Ireland, with special reference to high need groups: Diabetes; Mental Health; Podopaediatric; Intellectual Disability; Renal.	4.23	84.7%	**12**	Short
Investigate the efficacy of treatments available for verruca.	4.23	77%	**13**	Medium
Epidemiological research on Diabetic Foot: amputation; ulceration; A&E; hospital admission	4.15	93.3%	**14**	Short
Research accessibility of specialist services, (such as vascular, orthotist), for high risk patients in receipt of Private podiatry services.	4.15	92.3%	**15**	Medium
Research on rheumatology and the role of the podiatrist in the management of the rheumatoid foot.	4.15	84.7%	**16**	Medium
Research and develop patient education and Health	4.15	84.6%	**17**	Medium

RESEARCH PRIORITY	Mean	Con Level	Rank	Time frame
Promotion.				
Investigate the impact of podiatry on the prevention of falls in the elderly.	4.15	77.0%	**18**	Medium
Develop podiatric foot screening systems for the detection of risk among the Irish population e.g. a universal annual foot review to reduce amputation rates.	4.15	77.0%	**19**	Long
Explore perceptions and attitudes of GPs and other allied health professionals towards podiatry services and roles, in terms of impact on patient referral rates.	4.08	77.0%	**20**	Medium

4.6.4 Key Themes for Podiatry Panel

From these top priorities three key themes were identified; amputation and multidisciplinary management in diabetes, podiatry service organisation and areas of clinical practice.

Amputation and Multidisciplinary management in Diabetes

Podiatry and diabetes emerged as a theme within the results. Most notable, the area of amputation was noted as the top ranked statement where the respondents highlighted the need for research into the effectiveness of podiatry in reducing below knee amputations in both Type 1 and 2 Diabetes. Further to this, the need to research the incidence of lower limb amputation in relation to multidisciplinary input was ranked 6. The need to investigate the strategies for the most efficient multidisciplinary management of diabetes was ranked 9. However, it was apparent that this area of diabetes and podiatric management was under-represented in research with results indicating that this patient group required research to be conducted into needs assessment for podiatry services in Ireland (rank 8). It is interesting to note that while multidisciplinary management was a topic requiring research, the role of podiatry within multidisciplinary teams in general did not reach consensus (consensus level; 69.3%). It is also worthy to note that an identical percentage was recorded for the area of research into wound healing and ulcer care, thus just falling below the consensus level. This was an interesting finding considering that ulceration is so closely linked to diabetes and noted as a precursor to lower limb amputation which featured so highly as a theme in the top ranked research priorities. The lower ranked themes also indicated the need for research in other areas of diabetes and amputation, for example the need to investigate hospital admission and the diabetic foot was ranked 14, and the need for the development of screening systems for the reduction of amputation rates was ranked 19.

Podiatry Service Organisation

The area of professional awareness and service organisation were strong themes (60%, ranks joint 4, 7, 8, joint 9, 11, 12). Specific areas of need were noted as investigating the awareness of the contribution and availability of podiatry services as part of the public health/primary care system (joint 4). Linked to this was the need for research to be conducted into exploring public accessibility to the service, and in particular for patients with diabetes as noted above (rank 8). The need to investigate how other disciplines are educated about the podiatry profession was ranked 7. This emerged again when the panel noted the need to investigate levels of regional professional

awareness (rank 11). The need to look at the cost-effectiveness of podiatry services ranked joint 9 within the top twenty priorities, with the needs assessment for services ranking 12.

Areas of clinical practice

Discrete areas of podiatric practice requiring research were noted. For example, podogeriatrics and the need to evaluate the role of podiatry and its impact on quality of life for the elderly population was ranked joint second. Nail surgery (equal ranked 4) and verruca treatment (rank 13) were also noted as areas of podiatric practice requiring further research to establish efficacy of procedures and treatment.

It is interesting to note that health promotion was given a much lower rank (rank 17) compared to that awarded by other therapy professions. For example, this contrasted markedly to results obtained for physiotherapy (ranks 5, 7, 8, 20). Another interesting finding for clinical practice was how the panel ranked rheumatology and the management of the rheumatoid foot (rank 16). This was surprising as such patients did not appear to be listed as a high need group. This highlights the importance of conducting a needs assessment for podiatry services as noted in rank 12.

Links to service users priorities and stakeholder priorities

It is interesting to note the similarities in the results obtained for the podiatry panel with that of service users. For instance, the need to identify the efficacy of a range of interventions to improve care for people with diabetes was ranked 9 in the top twenty research priorities by that panel. This concurred precisely with the results reported for the podiatry panel where the need to research the most effective strategies for management of diabetes was ranked joint 9.

The stakeholder priorities show a number of themes that compared well with those of podiatry. The cost effectiveness of therapy (ranked 1 by key stakeholders) compared with the joint 9 rank of the podiatry panel recognising the need to look at the cost-effectiveness of podiatry services. Regional variation of services was highlighted as a priority area by the key stakeholders and the podiatry panels achieving joint 8 and 11 respectively. It is particularly interesting to note that there were common themes of organisation of service and team working noted by both the podiatry and stakeholders panels, indicating that research priority areas were remarkably similar.

Timeframes

Six of the top twenty research priorities identified by podiatrists were identified as having short time frames where research should commence immediately (ranks 1, 2, 6, joint 9, 12, 14). Only one research priority was notes as long-term (develop podiatric foot screening systems for the detection of risk among the population e.g. a universal annual foot review to reduce amputation rates). The remaining research priorities in the top twenty were considered by the panel to have medium-term timeframe priority.

4.6.5 Discussion of Podiatry Priorities

The findings of this study are consistent with research that has been carried out previously in podiatry. It is not surprising that the area of diabetes permeated the priority list. The importance of this topic and its underpinning strategies have previously been highlighted for Ireland by the Diabetes Service Development (DSDG) Group (2002). They noted its socioeconomic impact on an under-funded health service. They also stressed the need for research to be carried out to reduce the 'human burden of diabetes' (DSDG 2002).

The incidence of diabetes has been widely researched. The Institute of Public Health in Ireland (2007) forecasted the prevalence of diabetes in Ireland in 2010 and 2015 in their report 'Making Diabetes Count'. A more recent international study noted that by 2025 diabetes mellitus will have increased to 380 million people worldwide (International Consensus on the Diabetic Foot, 2007). While there are many facets to this complex condition and its management, much work has already been conducted into the development of preventative strategies to decrease amputation rates within the UK and globally e.g. CREST (1998); International Consensus on the Diabetic Foot (2007) respectively.

Amputation was the highest ranked item within the list of priority areas for research. It would appear that the respondents noted the endpoint of one of the complications of diabetes rather than the earlier complications of ulceration and wound healing. The latter did not reaching consensus in the current study. This is surprising considering that Currie *et al*. (1998) found that foot ulceration is still the most prevalent serious complication of diabetes. Perhaps the most important statistic noted in relation to the results of the current study is that work carried out by Pecoraro *et al.* (1990). They found that amputations are preceded by foot ulcers in 85% of cases. Later work by Deerochanawong *et al.,* (1992) reported that 47% of patients who had undergone an amputation did not receive a complete foot evaluation carried out in the year preceding the initial ulceration or gangrene. A recent population-based cohort study conducted in Sweden reported that the incidence of vascular lower limb amputation is eight times higher in diabetic than non-diabetic individuals. This group also noted that 1 in 4 amputees may require a contralateral amputation (Johanesson *et al.,* 2009).

The panel did highly rank the need to carry out research into investigating the strategies for efficient multidisciplinary management of diabetes and highlighted that this group of patients required a needs assessment for podiatry services. This concurs with work conducted by Reiber *et al.* (1999) who noted that improvement in foot care programmes may prevent 50% of amputations through early identification of problems, education and intervention.

Much research has already been conducted through the setting up of highly successful interdisciplinary diabetic foot clinics within the UK and beyond. It has been well proven that successful management of diabetic foot pathologies can only be achieved through this multidisciplinary management and the delivery of high quality inter-professional patient care (Edmonds *et al.,* 1986; Van Gils *et al.,* 1999; Balabanova *et al.,* 2009).

Comparison with other podiatry research priority studies

As with many of the other therapy professions, there is a dearth of podiatry literature on research priorities to enable comparison with the current results. The last major research priority exercise was published by the Podiatry Research Forum in 2003 who reported the results of a 'real-time' Delphi exercise (Curran 2003). Those results identified research topics that were dissimilar to those obtained in the current study. Nonetheless, a later study by Vernon (2005) produced similar findings including agreement that research was required to investigate the cost effectiveness of podiatry services. This author also stressed the need for a formal research strategy to be put in place for podiatry (Vernon *et al.* 2003). A more recent paper maintained that podiatrists are becoming more involved in research. However, there is a need for greater coordination and focus for research-related activity in podiatry where podiatric practice will be relevant and evidence-based within a respected, supported research culture by the year 2015 (Vernon and Campbell 2006).

4.7 Orthoptics

4.7.1 Response Rate

The response rates for the orthoptics expert panel are as follows: nine orthoptists made up the expert panel for Round 1; 78% (n=7) responded to round two and 86% (n=6) responded to round three. The small number represents approximately 50% of orthoptists who are members of the professional body currently practising in Ireland.

4.7.2 Demographic Profile

Of the nine expert panel members in the orthoptics panel, two were male (22.2%) and seven were female (77.8%). Two of the panel members were aged 25-34 years (22.2%), four were aged 35-44 years and three were aged 45-54 years (33.3%). Two panel members had between 6-10 years professional experience (22.2%), three had between 16-20 years professional experience (33.3%), two had between 21-25 years experience (22.2%) and two had between 26-30 years experience (22.2%).

4.7.3 Research Priorities

Table 15: Top Twenty Research Priorities Identified by Orthoptics Panel shows the top twenty research priorities identified by the Orthoptics Panel. Six of the items received a consensus level of 100% (Ranks 1,2,3,6, 7 and 10). While there are twenty priorities in Table 15, twelve are joint items. None had a long term time frame.

Table 15: Top Twenty Research Priorities Identified by Orthoptics Panel

RESEARCH PRIORITY	Mean	Con Level	Rank	Time frame
Review of referral criteria and education of referral sources.	4.57	100%	**1**	Short
Investigation of areas without an orthoptic service, including effects on patient outcomes and patient satisfaction.	4.42	100%	**2**	Short
Research into source, type and quality of information provided on referrals to orthoptic services.	4.28	100%	**3**	Short
Research into the long term effects of poor vision on education and employment.	4.28	85.8%	**4 (joint)**	Medium
Investigation of the effectiveness of vision screening.	4.28	85.8%	**4 (joint)**	Medium
Research into manpower requirements with regard to orthoptics service provision.	4.14	100%	**6**	Short
Research into the accuracy of referrals to orthoptic service from the National School Entry Vision Screening Programme.	4.14	100%	**7**	Short
Research into the relevance of referrals due to family history of squints.	4.14	71.5%	**8**	Medium
Quantitative and qualitative research into outcomes of occlusion therapy.	4.14	71.4%	**9**	Medium
Investigate the cost effectiveness of orthoptic treatment.	4.00	100%	**10**	Short
Research into Continuing Professional Development, including CPD delivery/access for rural/stand alone orthoptists	4.00	85.7%	**11 (joint)**	Medium
Investigate the question: Are there clinical specialists in various	4.00	85.7%	**11**	Medium

RESEARCH PRIORITY	Mean	Con Level	Rank	Time frame
fields?			**(joint)**	
Examine existing supports & barriers to professional development.	4.00	85.7%	**11 (joint)**	Medium
Examine referral routes of new patients.	4.00	85.7%	**11 (joint)**	Medium
Clinical research to examine the effect of refractive correction on strabismus.	4.00	85.7%	**11 (joint)**	Short
Research into stroke assessment.	4.00	85.7%	**11 (joint)**	Medium
Explore the long term outcomes of amblyopia treatment.	4.00	85.7%	**11 (joint)**	Medium
Research into orthoptic involvement in Specific Learning Difficulties	4.00	85.7%	**11 (joint)**	Medium
Comparative research into orthoptic practice in Ireland *vis-à-vis* other countries.	3.85	85.7%	**19 (joint)**	Medium
Research into visual development in normal and special needs children.	3.85	85.7%	**19 (joint)**	Medium

4.7.4 Key Themes for Orthoptics

From these top priorities five key themes were identified: clinical issues (six items, 30%); patient referrals (five items, 25%), professional development and specialisation (four items 20%); service and workforce issues (three items, 15%) and long term QOL effects of vision screening (two items, 10%).

Clinical Issues and Long Term Impact Assessment

The top research priorities focused on a number of clinical issues. These included the importance of patient outcomes (ranks 2, 9 and 11 joint), vision screening (ranks 4 and 7), the treatment of strabismus (ranks 8 and 11 joint), occlusion therapy (rank 9), refraction therapy (rank 11 joint), amblyopia treatment (rank 11 joint); child visual development and learning disability (ranks 11 joint and 19 joint) and stroke assessment (rank 10). The importance of the long term impact of vision difficulty as an outcome has also been identified as a priority topic. The panel's identification of the importance of researching patient outcomes reflects some of the research priorities for the other panels and resonates with contemporary health policies and strategies (DH 2006; HSE 2008). Further, since orthoptists have a key role in the diagnosis and the management of strabismus it is not surprising to see this ranked 8 and joint 11. Strabismus has been central to orthoptic clinical research since the early 1970s (Graham 1974).

Strabismus, amblyopia, occlusion and refraction treatments are presented as the most clinically-specific items in the top twenty priority list. Contemporary orthoptic literature shows a predominance of studies that look at the combined syndrome of strabismic amblyopia in terms of the efficacy of occlusion therapy. For instance, Shotton and Elliott (2008) carried out a systematic review of available evidence on the comparative effects of conventional occlusion therapy versus partial occlusion and optical penalisation on strabismic amblyopia. They found that the most effective approach was the combination of occlusion (partial or complete patching), refractive correction (eye glasses) and near-activities, though further research was deemed necessary to explore the role of near-activities.

The long term impact of visual problems on educational and occupational performance was ranked 4 in the top twenty priority list. Such quality-of-life outcomes are also increasingly evident in contemporary orthoptic / ophthalmic journals. In Germany, Frank and Gall (2008) addressed the use of research tools and methods for measuring the quality-of-life impact of visual impairment. They argued that these kinds of studies provide a 'meaningful complement to objective data'. Assessing the effects of stroke on ocular effectiveness was a joint 11 priority and again is reflective of current literature (Rowe *et al,* 2009).

Screening was deemed an important topic for research by the orthoptic panel, linked with referrals and the school health programme as well as with service and cost-effectiveness. This is unsurprising and echoes current studies in the UK and US. For instance, Alexander et al (2009) carried out a descriptive cost analysis of vision screening for the paediatric population of a primary healthcare trust in the UK. They concluded that given the long term implications of visual impairment, the relatively high cost of screening was warranted and recommended planned resource allocation and appropriate workforce organisation.

Finally, orthoptic involvement for children with learning disability (as well as comparative work on visual development) formed two of the top twenty priorities (joint 11 and joint 19). Again, this is a growing theme in orthoptic research internationally. The orthoptic assessment of children with learning difficulties was the focus of an English study by Dunlop and Dunlop (2007). They found that the development of special tests and experimental treatments for specific visual problems associated with some forms of learning disability showed promising results. They recommended that these orthoptic procedures should be part of a multi-disciplinary diagnostic and remedial approach.

Referral Processes and Service Delivery

Patient referrals are a strong source of research ideas among the orthoptics panel (ranks 1,3,7,8, and 11 joint). This suggests that there are problems with referrals in and out of the orthoptic services in Ireland, possibly emanating from a concern over the proper use of orthoptists' time. The panel members want referral criteria reviewed (rank 1) and referral sources educated as to those criteria (ranks 3 and 7). Related to that are the priority items that signify research into the accuracy of referrals from school sources (rank 7) and the relevance of family history to the implementation of a referral (rank 8). Finally, an examination of the referral routes of new patients was ranked joint 11. All these statements point to the desire to track and review the accuracy and relevance of referrals to orthoptic services, again with implications for manpower, cost and service delivery.

Service delivery should be researched according to the effects of non-availability of orthoptic services (rank 2) and, linked with this, in terms of manpower requirements (rank 6). The cost-effectiveness of orthoptic treatment is another related priority (rank 10) under the service delivery theme. Several of the other panels have highlighted the topic of cost-effectiveness, most especially the key stakeholder panel. It is increasingly evident that a number of these themes overlap both within and across panels. The cost-effectiveness of a particular professional service is related to the role of that profession within the multi-disciplinary, wider healthcare arena, to professional development and to the perceived need for specialisation.

Workforce Issues, Professional Development and Specialisation

Related priorities under this heading are continuing professional development (rank 11 joint), the number of clinical specialists in orthoptics (rank 11 joint), an analysis of supports and barriers to professional development (rank 11 joint), and a comparative review of orthoptic practice with that in other countries (rank 19 joint). Again, this is indicative of a profession moving towards maturity and

considering whether the healthcare workforce should be mostly generalist or specialist (McKenna et al 2003).

Timeframes

Seven of the identified top twenty research priorities in orthoptics have short-term timeframes meaning that the research should commence immediately (ranks 1,2,3,6,7,10 and 11 joint). This includes the top three identified research priorities for this panel. The remaining research priorities in the top twenty have medium-term timeframes assigned to them by this panel, indicating that the research should commence in the next twelve months.

When respondents were asked to identify the timeframe for the top twenty priority items it is again apparent that service delivery is perceived as being the most important. The top six priorities, all related to service delivery and four were identified as requiring a short-term timeframe.

4.7.5 Discussion of the Orthoptic Research Priorities

It was interesting to find that eleven out of the orthoptics top twenty priority items relate to the delivery of the service and other professional issues rather than the treatment of specific ocular conditions. The main priorities for orthoptists in terms of service provision were related to workforce, cost effectiveness, professional roles, and to how referrals may be improved in terms of patterns and effectiveness.

The priorities focused on clinical conditions related to a small number of specific conditions and to how visual problems influence education and long term work abilities. However, even with these the basic philosophy appears to relate to clinical service such as how interventions effect quality-of-life issues and improve the delivery of orthoptic services. These priorities appear to reflect the perceived need to justify the value of an orthoptic service. This could be a reflection of the level of development of the orthoptic profession in Ireland and the perception that to develop the service requires a justification in terms of patient outcomes and patient satisfaction. Furthermore, the item 'investigate manpower requirements' (rank 6), again demonstrates the perceived need of orthoptists to evaluate and investigate the necessary requirements for the delivery of an effective orthoptic service.

On examination of the responses of the orthoptic panel, the top forty priorities show certain similarities in mean, median and consensus level. In the latter half of the top forty priorities, research into the more common areas of orthoptic practice are prevalent. These areas are strabismus, amblyopia management, visual screening, glaucoma management and specific learning difficulties such as dyslexia.

When evaluating the respondents' views as to the importance of research and professional development, it is interesting to note that the highest rank priority is 11 joint. This is 'to examine existing supports and barriers to professional development' which achieved a consensus level of 85.7%. Another 11 joint priority was 'researching continuing professional development including delivery and access for rural/standalone orthoptists'. However, we only find very specific research priorities outside the top twenty list [ranks 33, 34, 35, 36, 37 and 41]. A major difference to the other professions appears to be the apparent lack of concern that the orthoptist panel had about the number of orthoptic PhDs. This was ranked 49 compared for example with the physiotherapy panel whose top ranking priority was a career pathway that rewards further education.

Comparison with Key Stakeholder and Service User Priorities

Though there were six clinical topics in the top twenty, the orthoptic panel tended to focus on professional role and service delivery issues, thus resonating more with key stakeholders than with fellow therapy professions. While health promotion is a major research priority theme from the other panels, it is not evident in the orthoptic priorities. The need for research to derive from both qualitative and quantitative methodologies resonates with that identified by the occupational therapy and speech and language therapy panels.

Other themes that appear in several of the wider panels but do not feature in the orthoptic top twenty list include multi-disciplinary working, primary care, problems associated with old age, and diabetes. This is surprising, given the severe implications of compromised safety in the elderly who have poor vision (Coleman *et al,* 2009) and retinopathy associated with diabetes (Georgievski *et al,* 2007).

The priorities identified by the orthoptist panel only showed small areas of overlap with those identified by the service user panel. For instance, the service user priority of carrying out 'research that improves patient care' could be said to resonate with some of the more clinical and service-oriented orthoptic priorities.

4.8 Key Stakeholders

4.8.1 Response Rates

24 key stakeholders responded to Round 1; the response rate at Round 2 was 91% (n=22); and at Round 3, 68% responded (n=15).

4.8.2 Demographic Profile

The majority of key stakeholders were female (78%), aged 45-54 years (44%) and were qualified more than ten years (73%).

4.8.3 Research Priorities

In Table 16 the top 20 priorities for the key stakeholder panel are shown. None achieved a consensus of 100%.

Table 16: Top Twenty Research Priorities identified by Key Stakeholder Panel

RESEARCH PRIORITY	Mean	Con Level	Rank	Time frame
Evaluate the cost effectiveness of therapy interventions.	4.45	90.9%	**1**	Medium
Research into quality assurance and quality improvement in the Therapies.	4.45	86.4%	**2**	Medium
Research the effectiveness of integrated care pathways across Acute and Primary Care services.	4.41	90.9%	**3 (joint)**	Short
An economic analysis and systematic review of early intervention and early identification strategies.	4.41	90.9%	**3 (joint)**	Medium
Research into the development of effective team working: intra-, inter- and trans-disciplinary and evaluate impact.	4.41	86.3%	**5**	Short

RESEARCH PRIORITY	Mean	Con Level	Rank	Time frame
Identify best team models for the delivery of a patient-centred service through examination and production of evidence.	4.41	86.3%	**6 (joint)**	Medium
Evaluate service delivery models from the perspective of service users.	4.41	86.3%	**6 (joint)**	Medium
Identify the role of the therapies in the management and delivery of the new Primary Care Model.	4.36	86.4%	**8 (joint)**	Short
Evaluate the impact of service availability by region.	4.36	86.4%	**8 (joint)**	Short
Research Quality of Life as a therapy outcome in chronic disease management: Stroke; arthritis; musculo-skeletal; pain; neurological; respiratory.	4.36	86.3%	**10**	Medium
Research into the development of primary care services and primary care teams.	4.32	91%	**11**	Short
Devise mechanisms to ensure that practitioners adhere to best practice models.	4.32	86.4	**12**	Medium
Explore how best to integrate services across acute and community sectors.	4.27	90.9%	**13**	Short
Develop Therapy led service delivery on continuum of care for young patients requiring Stroke Rehabilitation.	4.27	86.4%	**14**	Medium
Develop research partnerships between clinical and academic centres.	4.27	81.9%	**15**	Short
Develop the evidence base on the efficacy and effectiveness of therapy interventions to deliver best health care.	4.27	81.8%	**16 (joint)**	Medium
Research how best to develop adequate clinical audit systems.	4.27	81.8%	**16 (joint)**	Medium
Assess the effectiveness of current practices across all care contexts from the perspective of service users.	4.27	77.3%	**18**	Medium
Build knowledge and skills capacities in research methodology among the therapy professions to equip them to both carry out and critique research.	4.27	72.7%	**19**	Long
Assess the short and long term financial implications of providing co-ordinated, patient-centred care to older people with multiple health conditions.	4.23	86.4%	**20**	Medium

4.8.4 Key Themes for Key Stakeholders

From the top twenty priorities, 3 key themes were identified; service organisation, the need to evaluate practice/cost effectiveness/quality assurance, and research training.

Service Organisation

Unlike the profession specific priorities most items (35%) in the top 20 priorities for the key stakeholder panel related to issues around service organisation. This panel identified the need to explore the best way to integrate services across the acute and community sectors (rank 13), the need to investigate the effectiveness of such integrated pathways (rank 3), and, more specifically, the role of the therapies in the 'new primary care model' (rank 8). Team working was also important

(ranks 5, 6), particularly with respect to the move to patient-centred care. The key stakeholders thought that research needed to be carried out to identify the best team models for this type of care, the development of effective team interaction, and then evaluate the impact of these teams. Two other statements (ranks 6, 8) specified the need to evaluate the impact in disparities in regional access to services, and highlighted the importance of evaluating service delivery models from the service user's perspective. The stakeholder panel also identified the need to devise mechanisms in order to ensure that practitioners adhered to these best practice models (rank 12).

Need to evaluate practice/cost effectiveness/quality assurance

Three other main areas were identified by the key stakeholder panel: 25% related to evaluation of practice (ranks 10, 14, 16, 18, 20) concentrating on quality of life as an indicator of therapy outcome in chronic disease (rank 10) and determining effectiveness from the perspective of the service user (rank 18). There were two more specific items on care for young patients with stroke (rank 14) and older people with multiple health conditions, particularly with respect to the financial implications of the latter (rank 20).

The top rated item focused on the need to evaluate cost effectiveness of interventions (rank 1), and two others related to the need for research on quality assurance and improvement in the therapies (rank 2), and the need for research on how best to audit practice (rank 16).

Embedding education/research into practice

Two of the research priority items (ranks 15, 19) related to this theme. The key stakeholders highlighted that it was a priority to carry out research on how best to develop research partnerships between academic and clinical centres, and secondly to research how best to build research capacity in the therapy professionals.

Time frame

There was a fairly even balance between priorities that needed to be addressed in the short term and those to be addressed in the medium term. However, it was clear that the key stakeholders see that research into primary care models, team working and the interface between the primary and secondary sectors needs to be most urgently addressed. It is also worth noting that key stakeholders thought that building research skills and capacities in therapy professionals was a long term outcome.

4.8.5 Discussion of the Key Stakeholders Research Priorities

It was not surprising to note that the key stakeholder panel were well informed on current policy, specifically the shift in healthcare away from the hospital setting to the community. Different policy reports in Northern Ireland and Republic of Ireland (DHSSPS, 2004; HRB 2006 [Mant report], DoHC, 2008c) have identified the importance of multi-disciplinary team working, and the increased role of the therapies in these teams ([Mant report] HRB 2006). Indeed, most of the key stakeholder research priorities related to service organisation and team working. Another important theme identified by this group was the recognition that clinicians are reluctant to change their practice, even if there is good evidence that certain models of care are better from a clinical, cost and patient perspective. Indeed it has been shown that the translation of research evidence into practice is a huge challenge for the health service. This was identified as a potential issue in the Forfas report (2006), and research into the uptake of clinical guidelines among health care practitioners has identified a range of barriers that need to be addressed (See Parahoo, 1999). Therefore strategic action on the part of managers at all levels of the health service will be required to ensure that clinicians adhere to best practice models. Another important related priority identified was the need to develop research partnerships between

academic and clinical centres, and the need to build research capacity in the therapy professionals, again mirroring issues raised in the Forfas (2006) report.

It was surprising that research around the role of the therapies in health promotion and disease prevention did not feature in the top 20 priorities for the key stakeholders. It was not an area of emphasis in the statements at round 2 and 3. This is difficult to comprehend considering the drive in recent Irish policy documents such as *Tackling Chronic Disease: a policy framework for the management of chronic disease* (DoHC, 2008b). This theme did emerge from most of the discipline specific panels. Another point of difference between the stakeholder panel and the therapies panels was the difference in balance between the numbers of items which related to evaluation of practice. Nonetheless, the key stakeholders did identify the importance of investigating whether interventions were cost effective and the need to involve the service user in the evaluation of the health service, particularly with respect to quality of life. Cost effectiveness was a strong theme in the stakeholder group (ranks 1, 20), and is not surprising as cost containment in publically funded health services is a major area of national and international interest. In addition, two specific areas of practice were identified that overlapped with the physiotherapy panel priority areas: stroke and elderly care.

Finally the key stakeholders recognised the importance of building research skills in the therapies but interestingly this was ranked at 19 with a long term time frame. In contrast, the physiotherapy panel included this topic at higher rankings (1, 11, 16 and 18) with a short to medium time frames.

4.9 Service Users

4.9.1 Response Rates

Fifteen service users responded to the round 1 questionnaire, at round 2, 53% (n=8) responded and at round 3, 75% (n=6) responded.

4.9.2 Demographic Profile

There was a fairly even split between males (57%) and females (43%) in this panel. The two most common age groups were those aged 25-34 years (29%) and those aged 45-55 (29%), a similar percentage were aged 55 years and older (28%).

4.9.3 Research Priorities

The items for the service user Pane are shown in Table 17.

Table 17: Top Twenty Research Priorities identified by Service User Panel

RESEARCH PRIORITY	Mean	Con Level	Rank	Time frame
Support families in the development of coping and parenting skills	4.75	100.0%	**1**	Short
Research into the role of mutual help in recovery from mental illness	4.71	85.7%	**2**	Short
Cancer Research with regard to the therapy professions	4.62	100.0%	**3**	Short
Explore the meanings and identify factors associated with recovery	4.57	75.0%	**4**	Short

RESEARCH PRIORITY	Mean	Con Level	Rank	Time frame
Explore the barriers to accessing services with regard to developmental co-ordination disorder	4.50	100.0%	**5**	Short
Competence of professionals in working and communicating with patients.	4.50	87.5%	**6 (joint)**	Short
Developmental Coordination Disorder Research: Causes	4.50	87.5%	**6 (joint)**	Short
Research into dementia with regard to the therapy professions	4.50	75.0%	**8**	Short
Research the effectiveness of a range of interventions to improve care for people with diabetes	4.42	87.5%	**9**	Medium
Research into communication and co-ordination among therapy professions with regard to developmental co-ordination disorder	4.37	100%	**10**	Short
Fund longitudinal, comparative, matched-group studies of alternatives to drug treatment	4.37	87.5%	**11**	Short
Research into Speech and Language Disorders especially with regard to the needs of children.	4.37	75.0%	**12 (joint)**	Medium
Conduct an investigation into the possible barriers related to professional, specifically psychiatric labels, and how to address them	4.37	75.0%	**12 (joint)**	Short
Research the role of mutual help in the management of all chronic illnesses.	4.25	87.5%	**14**	Short
Explore therapy brought to the home as an alternative to clinics for families in need	4.25	75.0%	**15 (joint)**	Medium
Undertake research that leads to the development of models for integrated working across acute, residential and community settings.	4.25	75.0%	**15 (joint)**	Short
Explore the validity of the medical model, including possible connections between pharmaceuticals, universities, scientific journals and professional bodies.	4.25	75.0%	**15 (joint)**	Short
Carry out research that improves patient care.	4.12	87.5%	**18**	Short
Research into ADHD with regard to the therapies professions	4.12	75.0%	**19**	Medium
Research into asthma at a genetic level to identify specific genes that may cause asthma	4.12	75.0%	**19 (joint)**	Short

4.9.4 Key Themes for Service Users

A broad range of topics were identified in the top rankings, which reflected the demographic profile of the service users who responded to the Delphi survey. Most of the topics identified related to children (25% of items, ranks 1, 5, 6, 10, 12). Three of these specified that research should concentrate on Developmental Coordination Disorder (DCD) in terms of access to services, communication and coordination between the therapies, and identifying causes for this condition.

Other clinical areas that were considered to be a priority were mental health recovery (ranks 2, 4, 12), cancer (rank 3), dementia (rank 8), diabetes (rank 9), attention deficit hyperactivity disorder ADHD (rank 19) and asthma (rank 19). The research questions identified by service users were

generally quite broad e.g. *Cancer research with regard to the therapy professions* or *Research into dementia with regard to the therapy professions* and one was outside the scope of therapy research (genes and asthma). This is at variance with the profession specific priorities which were much more specific, and emphasised the need for research which evaluated aspects of practice. Perhaps this is understandable considering the broad views that service users may have about issues of relevance to health professionals. It is also notable that the areas of practice identified by service users did not feature as a priority for some professional groupings e.g. cancer and diabetes were not mentioned by the physiotherapy panel, although this panel did identify ageing as a priority area, within which dementia could be included. It is also notable that the service user panel identified disease specific research priorities. This contrasts with the speech and language panel where there were no specific disease related items in the top twenty priorities.

Three items identified by the service user panel could be classified under the theme of health promotion/self management (ranks 1, 2, 14). These included the need for research into how the therapies support families in developing parenting and coping skills, and the need to investigate the role of 'mutual help' in the recovery from mental illness or chronic illness.

Other themes that emerged from the service users that overlapped with the professions specific and stakeholder priorities were issues around models of integrated working, team working and communication, and location of services (rank 15, home versus clinic). Service users also identified alternatives to drug treatments as a priority. This may reflect the concerns that patients have about the side effects associated with medication (e.g. for pain) as identified in a recent general population European survey (Breivik *et al.* 2006).

Timeframes

Results show that most of the research priorities identified by the service user panel need to be addressed in the short term. Only three priorities, diabetes, speech and language therapy for children, and the therapy role in ADHD were identified as requiring medium term attention.

4.9.5 Discussion of Service Users' Priorities

It is not surprising that dementia featured in the top 10 ranked items given the demographic shift to an increasingly ageing population in Ireland and elsewhere (Dunnell 2008). It is likely that therapists will play an increasing role in the management of long term conditions such as dementia. This can be explained both by demographics and the fact that people are living longer due to better medical care for conditions featured in several of the research priorities, such as diabetes and cancer.

Service users were also interested in research around topics at the other end of the age spectrum, particularly for children with Developmental Co-ordination Disorders. They highlighted issues which have also been raised in policy/strategic health documents on the importance of therapists working together in a coordinated manner in Ireland, North and South (HSE, 2009; DHSSPSNI, 2005) In addition, access to services, particularly for school aged children was seen as important and this reflects health policy in Ireland (HSE, 2009).

Another key area identified by the service users is mental health. Once again, this reflects policy documents both nationally and the UK (DH, 2005; DoHC, 2006). This is also expected, particularly in the light of the prevalence of physical co-morbidities in this patient group and their poorer access to healthcare and health promotion compared to other groups.

As can be expected, service users were concerned about the competence of therapists' communication skills with service users and across multidisciplinary teams. They also identified support by therapists and other service users as important in managing healthcare needs. Both of these issues are very relevant given the increasing recognition of the role that service users should play in their own health care (UK: DH, 2000; Ireland: DoHC, 2006). In order for this shift to patient centred care, therapists may need to develop enhanced communication skills to fully involve service users in their care and treatment. This is also empowering and provides service users with a 'voice' as identified in the UK by the Darzi report (DH, 2008b) and in Ireland by the National Service Users' Executive, NSUE, (www.nsue.ie)

4.10 Limitations of the study

As with all research studies, this study too had some limitations which require highlighting here. These were related firstly to the consensus level and the emerging data and secondly to the difficulty in recruiting the target numbers of participants among the service user population.

4.10.1 Service user recruitment

Much has been written on the topic of service user involvement in health research, detailed in previous sections of the full report (Faulkner & Thomas, 2002; Beresford, 2007; Thornicroft et al., 2002). In relation to research focused on the development of health policy, the issue of service user involvement is perhaps addressed most notably by Preston-Shoot (2007). Service users are seen to be 'experts by experience' yet a number of barriers were noted that have an impact on their involvement in health and policy research. Broadly, these were: patchy involvement, with their views being reported through third parties; a constrained role within the overall research process; and a sense of falling short of any meaningful partnership or participation.
This was borne out in the current study. In spite of extensive efforts to enlist organisations and individuals as potential participants, the service user panel was smaller and less comprehensive than had been anticipated. It is likely that this shaped – and possibly skewed – the priority list that emerged. The reasons for the small number of service user participants were discussed at length with the Research Steering Group, the Research Advisory Group, some community and hospital therapy managers and other researchers. Telephone discussions with some service user organisation representatives were also held. These explorations suggested the following explanations.

- Members of service user organisations stated that they are 'bombarded' with requests to participate in academic research studies. They often feel more inclined to participate when the research is service-user led or initiated.
- The topic may have seemed slightly abstract or off-putting to service users.
- While university ethical approval was in place for the study, the health service institutions and clinics that were approached, as well as some of the large service user organisations, also had lengthy ethics and governance procedures of their own. The timescales of these procedures were outside the time frame remit of the study.

These experiences can inform future research of this type and clarify how to involve service users in a more productive manner.

- Involve service users in all steering and advisory groups from as early as possible in the research process.
- Approach potential participants face to face: this can be more inviting than contact through the post.

- Explore site-specific and organisation-specific ethics and governance requirements at an early stage to allow recruitment procedures to be initiated within the time frame of the study.
- Write service user material that is accessible to 'lay' readers.

This key limitation of the study needs further discussion and should be prioritised in the design and implementation of further studies.

4.10.2 Consensus level

The study required a 70 per cent consensus across the panel members. It is possible that a research priority identified in Round 1 by a specialist in a particular discipline did not achieve consensus because it was too esoteric or specialised for most of the other panel members to vote for in that discipline. Conversely, while it is also probable that some of the top priority items are too broad based and non-specific to be useful in the targeting of government funds, they attracted a high ranking from the professional therapist panel members.

4.11 Summary

This chapter presented and discussed the findings for each of the six therapy professions and then cross referenced these to what the key stakeholder and service user identified as research priorities. This was supplemented by a separate results section and discussion for the service users and the key stakeholders. It also included a limitations section.

It can be seen that there was many examples of overlap across and between the research priorities. Furthermore, several overall themes were common such as service organisation and health promotion. These and other commonalities will be discussed in greater detail in the following chapter and recommendations emanating from this discussion will be presented.

5. Conclusions

5.1 Introduction

The therapy professions make up a significant and growing proportion of the Irish healthcare workforce. This means that they have an important role to play in the provision of healthcare and the prevention of ill health. Their presence in the community is increasing where they are delivering care and treatment that a few years ago was only available in hospitals. They are also instrumental in helping to implement Irish Government policies such as: the transition of services closer to patients' homes; the importance of public education, health promotion and disease prevention; the change from 'low tech' to 'high tech' care and treatment; the change from patient passivity to patients as partners; the need for streamlined integrated community and hospital provision and integrated health and social care provision; the reduction of health and social inequalities; and addressing the health impact of lifestyle habits and practices.

Another government objective is to support the need for ongoing research to help generate and test the best available evidence for Irish health policy and health care. From the literature review in Chapter 2, it can be seen that many of the Irish therapy professions do not have a long history of research capacity building or of undertaking research that impacts on their practice. The need to support and encourage such research has been highlighted in policy documents such as the *Mant Report* (Health Research Board, 2006) and *Therapy Research - Delivering Best Health: A Research Strategy for the Therapy Professions in Ireland 2008-2013* (DoHC, 2008d). In the latter report there was a call for the identification of research priorities for the therapy professions.

Therefore, the aim of this study was to identify research priorities for each of six Irish therapy professions (physiotherapy, occupational therapy, podiatry, speech and language therapy, nutrition and dietetics and Orthoptics). This was achieved through gaining consensus on these priorities from the professionals themselves as well as from key stakeholders and service users. To reach consensus, three rounds of the Delphi methodology was used over a twelve month period. The top twenty research priorities for each of the therapy professions have been presented and discussed in the previous chapter. This final chapter provides an overall discussion and presents several recommendations.

5.2 Comparative overview of panel outcomes

Once the research priorities from the discipline-specific panels, the service user panel and the key stakeholder panel were triangulated, several significant themes (which could be recommended as key research priorities) emerged. Most of these could be categorised into seven major areas:

1 practice evaluation;

2 health promotion;

3 service organisation;

4 clinical academic training;

5 service user perspective;

6 cost-effectiveness of services;

7 epidemiology.

Table 18 summarises the rankings under each of the themes and also identifies key areas of practice and the main techniques/interventions that should be prioritised by each expert panel. It shows the ranking for the top 20 priority items for each panel across a range of topics, along with the main areas of practice and techniques that are a priority for research.

As can be seen, the themes varied across the eight panels. The physiotherapy panel identified 'practice evaluation', 'health promotion', 'clinical academic training', 'cost-effectiveness' and 'service organisation' as priority areas. On the other hand, the occupational therapy panel focused less on 'service organisation' and more on 'practice evaluation' and 'health promotion'. It is worth noting that occupational therapy was the only panel that produced an item that formed the category 'other' in the table ('Research the impact of environmental intervention on occupation').

Table 18: Summary of priority areas

	Practice evaluation	Health promotion	Service organisation	Clinical academic training	Service-user perspective	Cost-effectiveness	Epidemiology	Other	Areas of practice	Techniques/interventions
PT	2, 4, 5, 6, 8, 9,12, 13, 15, 17, 19	6, 8, 20	2 (PC)	1,10,11,16, 18		14			Obesity, older adults, chronic disease, bone health, ICU	Bobath facilitatory movement vs normal movement; cardiorespiratory techniques, manipulation, electrotherapy, innovative vs conventional techniques, group vs single, exercise
POD	4,13,16,18, 19	17	4, 8, 9,11,12,1415, 20 (PC)			9	14		Amputation, diabetes, older adults, rheumatoid foot, falls	Nail surgery, verruca treatment
OT	1, 2, 3, 6, 10,12,13,16 ,17,18,19	4, 9,10, 20			7,13	6, 8		15 env.	Vocational rehabilitation, stroke, encephalitis, obesity, mental health, dementia	Splinting, seating, vocational rehabilitation techniques
SLT	2, 3, 4, 5, 6, 7, 8, 9,11,18	7, 9	6,12,13,16	1	10, 16,16		14		Children and adolescents, severe phonological disorders, receptive/expressive language disorder, Down's syndrome, autistic spectrum disorder, voice and motor speech disorders, special needs, Specific Language Impairment	Talk tools, Lámh language class
N&D	1, 2, 4, 5, 10,11,12,13 ,14,15,16	3,5,8		19			9		Obesity, diabetes, nutrition support, health promotion, eating disorders, student training, nutrient requirements	Behaviour modification techniques
ORP	4,9,11,19		1, 2, 3, 6, 7, 8, 11	11, 19		10			Vision screening, specific learning difficulties	Occlusion therapy, amblyopia treatment
KS	10,14,16		2, 3, 5, 6, 11,12,13,14,1 6 (PC, PCS)	15, 19	6, 18	1, 20			Chronic disease, stroke in the young	
SU	3, 8, 9,11,15, 18,19	1, 2,12, 14	5,10,12,15				4, 6, 19		DCD, mental health, dementia, diabetes, cancer, ADHD, asthma, chronic illness	Family support, 'mutual help'

Key: ADHD = attention deficit hyperactivity disorder; DCD = developmental coordination disorder; env. = environmental aspects; 'Lámh = manual sign system used by children and adults with intellectual disabilities and communication needs in Ireland; N&D = nutrition and dietetics; ORP = orthoptics; PC = primary care; PCS = patient-centred service; PT = physiotherapy; POD = podiatry; OT = occupational therapy; SLT = speech and language therapy; KS = key stakeholders; SU = service users; talk tools = oral placement therapy techniques developed in the US.

5.2.1 Practice evaluation

'Practice evaluation' was the dominant theme across the six professional panels, echoing the main recommendation of the Irish *Report of the Commission on Patient Safety and Quality Assurance* (DoHC, 2008a): high-quality care depends on evaluation and research evidence. The nutrition and dietetics panel and occupational therapy identified the greatest number of these items, followed by physiotherapy, speech and language therapy, podiatry and orthopics. What is interesting is that key stakeholders identified only three statements under practice evaluation and the service users identified seven. This is not surprising: therapists identified more statements that related to their practice. After all, this reflects the main challenge in their job which is to provide optimum (evidence-based) treatment for individual patients on a day-to-day basis. In contrast, the emphasis for key stakeholders is often at the strategic level and so it is unsurprising that their priorities centred on service organisation, evaluation and cost-effectiveness. They also focused on how best to deliver services that represent value for money, particularly with respect to teamworking across secondary and primary sectors.

Some overlap was found between the panels – for instance, in those specific areas of practice that are a priority for evaluation and which require the development of an evidence base. These included obesity, care of older adults (and those with dementia), chronic disease, mental health, and diabetes. Service users identified cancer care as a priority, although this is not reflected in any of the therapy professionals' items.

Four areas of practice emerged as significant research priorities under the theme of practice evaluation: (a) obesity; (b) diabetes; (c) chronic disease management; and (d) older adult care.

(a) Obesity

Physiotherapists, occupational therapists and dieticians all pointed to the need for urgent research on obesity. This is not surprising in the light of the emphasis placed on obesity in terms of its adverse effect on health, well-being and longevity by many current national and international health policies (Ireland: DoHC, 2008a; DoHC, 2009. Europe: Donaldson & Banatlava, 2007. USA: US CDCP DHHS, 2009a). Indeed, investigating how exercise and behavioural techniques can be used to manage obesity in children and adults emerges as a central research priority when research priorities are combined *across* therapies. In addition, it was recommended that occupation therapy research focuses on interventions – such as community programmes of health promotion through lifestyle change, education programmes, home modifications, adaptations and equipment; compensatory training in activities of daily living; wellness programmes for children, teenagers and adults; and play and physical education in schools. Investigations should also consider the biopsychosocial needs of people with obesity; their self-perceptions and life experiences; and how to develop environments to enable their participation in physical activities.

(b) Diabetes

Podiatrists, nutritionists and dieticians and service users were the greatest supporters for research on this topic. Diabetes research is also a major theme in national and international strategies (UK: DH, 2009a, b. Europe: Donaldson & Banatlava, 2007. USA: US CDCP DHHS, 2009b.) because of its role in severe complications for cardiovascular or ocular health, and the risk of lower-limb ulceration and amputation. Diabetes also emerged as a central condition that linked into other areas requiring research attention – it was evident, for instance, that diabetes and improved care/cost-effective strategies formed a common goal across the key stakeholder and podiatry panels. Therefore, the priority research areas for diabetes are: investigations into lower-limb amputation prevention; service

organisation in the delivery of multidisciplinary management of diabetes; and the overall need to research interventions to improve care for people with diabetes. These triangulated research priorities formed a common goal from the podiatry, nutritionists and dieticians, key stakeholder and service user panels.

(c) Chronic disease management

Chronic disease management was a priority across all the eight panels and this is in line with many recent policy documents from Irish, European and American governments (Ireland: DoHC, 2008c. UK: DH 2009a. USA: US CDCP DHHS 2009c) (see Tables 2–3 of the main report). Specific chronic conditions were those that are acknowledged widely to increase mortality and morbidity in Ireland: diabetes (as noted above); cardiovascular conditions (heart disease and stroke, in particular young stroke); respiratory conditions; and cancer. However, research into other chronic diseases was also seen as important, especially research that examines those painful and distressing conditions that affect a person's quality of life, limit activity or inhibit the ability to work – for example, arthritis, low-back pain or mental health problems. A range of appropriate techniques and/or interventions to deal with chronic conditions was also identified across the panels (see Table 4 above).

The theme of chronic disease management overlaps with that of health promotion and indicates that while the therapy professions need to identify the most cost-effective approaches to managing chronic disease and promoting self-management, this should be coupled with a greater drive towards disease prevention, public education, health promotion and a 'wellness' culture. This is reflected too in the Irish Department of Health and Children's recent framework document *Tackling Chronic Disease* (DoHC, 2008c), which targets lifestyle change, health education and promotion, appropriate access to care and a push towards primary prevention.

(d) Older adult care

Physiotherapists, occupational therapists, podiatrists and service users all identified ageing and problems and conditions associated with it, such as risk of falls and dementia. Given the demographic shift towards greater longevity, health problems associated with ageing are seen as high research priorities and this is also borne out in current Irish health strategies (McKee & Belcher, 2004; HSE, 2008). Health professionals prioritised research that would enhance independent living, provide more therapy in the community, keep people at home for longer, reduce hospital admissions and improve their quality of life. Service users specifically identified research into dementia as a research priority.

5.2.2 Health promotion, disease prevention and patient education

All the panels except orthoptists and key stakeholders prioritised health promotion research from both single and multidisciplinary perspectives. This featured particularly strongly in the occupational therapy priorities, with specific reference to health and well-being, disease prevention and education for healthy behaviours. This is unsurprising – as a discipline, occupational therapy places its focus on humans as occupational beings and has a central philosophy that emphasises the positive effects of occupation on health at both individual and societal levels (Wilcock, 1998).
As noted above, health promotion was a major recurring theme across most panels, with two significant sub-themes:

(a) Health and well-being impact factors

With the shift of emphasis from treating ill-health to promoting health and well-being in Ireland (McKee & Belcher, 2004; DoHC, 2001 and 2006; HSE, 2008) it is clear that health research should focus on the production of an evidence base for healthy lifestyle behaviours. Each panel presented

slightly different topics in relation to health promotion. For instance, physiotherapists point to the use of exercise to prevent childhood obesity, promote bone health and address the risk of falls among the elderly population. Occupational therapists identified the need to understand the occupational factors that relate to obesity, mental health and positive ageing and how this might lead to occupational satisfaction. Speech and language therapists highlighted health promotion regarding early and indirect interventions in disability and in the health education and training of carers and teachers. Podiatrists focused on the prevention of diabetic foot-related amputation through foot-care programmes. Nutrition and dietetics was the most emphatic panel regarding evidence-informed health care: this panel's top research priority is to develop the evidence base for the prevention of obesity, indicating the importance of early intervention and education.

(b) Disease prevention and health education

Disease prevention and education for healthy behaviours and attitudes were also recognised as priorities for research, especially concerning the development of knowledge and insight into best models and methods. Again, this mirrors the general themes of a range of policies and strategies (Ireland: DoHC, 2008c. UK: DH UK, 2009b; Scottish Executive Department of Health, 2002. USA: US CDCP DHHS, 2006 and 2009a, b, c. Europe: McKee & Belcher, 2004). In relation to the prevention and treatment of disease, obesity and diabetes emerged as the most important target areas. Strategies to address these and the other objectives include health-promotion initiatives, audit and evaluation of current practice, and research to establish the effectiveness of nutrition indicators and health-outcome measures.

5.2.3 Service organisation

The key difference between the key stakeholder panel and the six professional panels was that key stakeholders placed a much greater emphasis on service organisation and delivery. (It is however worth noting that service organisation was also highlighted by podiatrists, physiotherapists and orthoptists.) A common goal was the importance of research on the effectiveness of the primary care model and on teamworking. The main service organisation topics are:

(a) An increased focus on primary care and a seamless primary–secondary care interface, reflecting national and international health policy (see Table 1 of the main report).

(b) Teamworking, specifically multidisciplinary teamworking, as a focus of research studies, as well as interdisciplinary research programmes.

(c) Referral systems and issues surrounding the relevance and management of referrals.

5.2.4 Clinical academic career

Not surprisingly, clinical academic training was considered very important by most of the professional panels, including the dieticians, speech and language therapists, orthoptists and the physiotherapists. While the key stakeholders did identify the importance of developing research capacities in the therapy professions, they did so in only two of their top 20 priorities and only as a long-term objective. Nonetheless, in order for research capacity initiatives to succeed in the clinical setting, it is vital that key stakeholders such as policy makers and managers are committed fully to this process.

A 2006 survey of the number of PhD graduates in each of the six therapy professions showed that it is necessary to increase research-trained therapists in all six disciplines in order to drive the Irish national research agenda forward and ensure 'the enhancement of health and social care services across primary acute and community care' (DoHC, 2008a). One suggestion made by some of the panels is the creation of clinical academic career pathways similar to those in the UK as envisaged by

Forfás & the Department of Health and Children (2006) and the Finch Report (UKCRC, 2007). Policy documents also highlight the importance of professional education and training (Ireland: DoHC, 2001; N. Ireland: DHSSPSNI, 2009; USA: US DHHS, 2008). The main sub-themes are:

(a) Research the best approach for the construction of clinical academic career pathways that reward research and provide protected time.
(b) Develop postgraduate education and training for each therapy profession.

Linked to this priority, the key stakeholders identified the need to develop research partnerships between academic and clinical centres; this was not identified by any of the clinical panels or the service users. This may be because the key stakeholders may be more interested in processes that will help embed research into the health service. They would also be more aware of the recommendations by the Advisory Council for Science Technology and Innovation that links between academic centres and the health service need to be put in place in order to strengthen health services research (Forfás & DoHC, 2006).

5.2.5 Service user perspective

In comparison to the other panels, key stakeholder panel members seemed to be the most aware of the policy shift relating to the greater involvement of service users. Even so, this was also prioritised by occupational therapists and speech and language therapists. These panels called for:

(a) Service user involvement as partners through all stages of the research process, from the construction of research questions, the design and implementation of studies to the writing-up and dissemination of results.
(b) The seeking of service user views and experiences in relation to conditions, treatments and services.

5.2.6 Cost-effectiveness

A key tenet of modern health care is that control of costs and value for money are central to all decisions made. The panels that identified cost-effectiveness as a research priority were key stakeholders, occupational therapy, physiotherapy, podiatry and orthoptics. There were two different angles on this.

(a) To seek evidence on the cost-effectiveness of a particular professional service (identified by podiatry and orthoptics).
(b) To seek evidence on the cost-effectiveness of particular interventions such as community care for dementia.

Cost-effectiveness was also a strong theme in the stakeholder group (ranks 1, 20). This is unsurprising as cost-containment in publicly funded health services is a major area of national and international interest.

5.2.7 Epidemiology

Epidemiology is the study of factors affecting the health and illness of populations, and is highly regarded in evidence-based health care for identifying risk factors for disease and determining optimal treatment approaches to clinical practice. It is not surprising therefore that it emerged as a

theme across several panels, especially the service user panel. Four sub-themes emerged under this heading:

(a) The incidence of diabetic foot: ulceration and amputation rates.

(b) The nutritional status of the population, specifically with regard to vitamin D.

(c) The incidence and prevalence studies of speech and swallowing disorders.

(d) The causes and incidence of developmental disorders, such as attention deficit hyperactivity disorder (ADHD) and developmental coordination disorder (DCD).

5.3 Recommended time frames for commencing the research

Table 19 gives the identified time frames for each of the themes as recommended by the expert panels. A short time frame indicates that the research should commence immediately. The two major themes which received a short-term rating and thus seem to be allocated a sense of urgency were service organisation and epidemiology. Both these themes are linked in that epidemiological research should inform service planning and implementation (the similarity in time frames is not, as a result, surprising). Research which should start immediately suggests a high level of concern, with both effectiveness and integration in the delivery of services and the importance of those services being designed around evidence of need and evaluation of existing provisions.

Table 19: Suggested time frames for major themes

Major theme	Suggested time frame
1. Practice evaluation	Medium
2. Health promotion	Medium
3. Service organisation	Short
4. Clinical academic training	Medium
5. Service user perspective	Medium
6. Cost-effectiveness	Medium
7. Epidemiology	Short
8. Other	N/A

Key: Short term – Research should commence immediately; Medium – research should commence within 12 months.

A medium time frame suggests that the research should commence within 12 months. The medium-term rated themes (practice evaluation, health promotion, clinical academic training, service user perspective and cost-effectiveness) all stem from a view that these themes will require a longer time period to investigate, since extensive planning and pre- and post-measures of variables are needed in these types of study. A long time frame suggests that the research should commence within five years. Few of the research priorities were seen as needing a long time frame; indeed, none of the major themes attracted a long time frame.

It was up to the panel members themselves to decide on the urgency or not of addressing the identified research priorities. Considering that there has been little research carried out by the therapy professions in Ireland, perhaps it is not surprising that many of the time frames were identified as short or medium term.

6. Recommendations

6.1 General recommendations

From the conclusions outlined above and taking into account the themes identified, the following general recommendations can be made.

6.1.1 Practice evaluation

In alignment with the HSE Corporate Plan (HSE, 2008) there is an urgent need for research into the evaluation of clinical practice from a multidisciplinary perspective.

Recommendation 1: Research should be undertaken into the evaluation of clinical practice from a multidisciplinary perspective in the following topics: obesity; diabetes; chronic disease management; and care of older adults. In addition, clinical studies are needed to evaluate behavioural approaches to prevent chronic disease and to manage existing chronic disease.

6.1.2 Health promotion, disease prevention and patient education

Recommendation 2: Multidisciplinary research programmes are required to investigate the following: factors that impact on health and well-being; health promotion and disease prevention; and patient education.

Recommendation 3: Identify and evaluate the role that each therapy profession plays in health promotion and disease prevention.

6.1.3 Service organisation

Service delivery and organisation research should be prioritised in order to address the research priorities identified both by stakeholders and the therapy professions. Specific research questions should focus on the clinical and cost-effectiveness of primary care teams in preventing hospital admissions and enhancing patient self-management. Research should also be undertaken to explore how to optimise multidisciplinary teamworking, referral systems, and communication between and across the health professions and with patients and carers.

Recommendation 4: In order to support research projects and programmes focused on service delivery and organisation, mechanisms should be considered for supporting research in these areas.

6.1.4 Clinical academic career

Government should look favourably on research proposals and programmes that include an element of research capacity and capability building. A steering group composed of stakeholders in health service, academia and funding agencies should be established to explore the development of clinical academic careers in the therapy professions.

Recommendation 5: Explore how best to develop clinical academic training for members of the therapy professions.

6.1.5 Service user perspective

Service users should be involved in all aspects of the research process from design to dissemination. Researchers should be explicit in communicating how the proposed research has implications for enhanced user engagement. Particular attention should be paid to the needs and experiences of service users and their carers.

Recommendation 6: Research should be carried out on how best to involve service users and their carers as partners in research plans, processes and outputs.

6.1.6 Cost-effectiveness

Value for money is central to decision making in a modern health service. The balance between clinical effectiveness and cost-effectiveness should be investigated.

Recommendation 7: Research should be undertaken into the cost-effectiveness of specific therapy treatments.

6.1.7 Epidemiology

The science of epidemiology underpins health policy and strategy because it identifies the factors that affect the health and illness of populations. This information feeds evidence-based policy and thereafter evidence-based practice.

Recommendation 8: Epidemiological research should be undertaken in the following areas: the incidence of diabetic foot; ulceration and amputation rates; the nutritional status of the population specifically with regard to vitamin D; the incidence and prevalence studies of speech and swallowing disorders; the causes and incidence of developmental disorders such as attention deficit hyperactivity disorder (ADHD) and developmental coordination disorder (DCD).

6.2 Specific recommendations

Some specific recommendations emanating from the research priorities identified by individual therapy professions can also be made.

6.2.1 Occupational therapy

Recommendation 9: Systematic reviews should be undertaken on the effectiveness of participation in occupation for the management of obesity and the cost-effectiveness of facilitating both early discharge and occupational therapy intervention in community care for dementia.

Recommendation 10: Both quantitative and qualitative research should be undertaken on occupation-based interventions and techniques. Specific topics for study include: obesity prevention; improved mobility; falls prevention; mental health; dementia; positive ageing; and vocational rehabilitation.

6.2.2 Podiatry

Recommendation 11: Research should be undertaken in diabetes, with a focus on podiatry, specifically for diabetic foot management, ulceration and lower-limb amputation prevention.

Recommendation 12: Epidemiology research should be carried out into service organisation. There should also be more clinical research into investigating foot ulceration management and incidence of lower-limb amputations.

Recommendation 13: Training in research should be made available to podiatrists.

6.2.3 Speech and language

Recommendation 14: Evaluation of speech and language therapy interventions is required: the care and treatment of children and adolescents should be a particular focus for attention.

Recommendation 15: Collaboration between speech and language therapy and education is needed in order to evaluate the reliability and validity of tools that have widespread use, such as talk tools, (oral placement therapy techniques developed in the US) and Lámh (a manual sign system used by children and adults with intellectual disabilities and communication needs in Ireland).

Recommendation 16: Service delivery models for speech and language therapy need to be developed further and evaluated across a variety of settings and client groups. This should include recommending optimal amounts and types of therapy for specific conditions.

6.2.4 Orthoptics

Recommendation 17: Research should be undertaken on: patient referrals; professional development and specialisation; and long-term quality of life effects of vision screening.

Recommendation 18: Service delivery should be researched, taking into account the effects of the non-availability of orthoptic services and, linked with this, workforce requirements.

Recommendation 19: Research should be commissioned into the necessary requirements for the delivery of an effective orthoptic service.

6.2.5 Physiotherapy

Recommendation 20: Clinical studies are needed to evaluate the optimum exercise approach to use in order to prevent the development of chronic diseases and to also manage existing chronic disease. Specific research questions should address group-based versus individual exercise approaches, and clinic versus home-based approaches; in addition, the specific role of exercise in child obesity should be investigated.

Recommendation 21: Establish an evidence base for the most commonly used techniques in physiotherapy across the range of specialist areas.

Recommendation 22: Investigate the role of physiotherapists (particularly in primary care) in health promotion of the elderly in terms of reducing falls, maintaining bone health and reducing hospital admissions and improving quality of life.

6.2.6 Nutrition and dietetics

Recommendation 23: Research should be conducted into the evaluation of current dietetic practice in a range of topics in order to develop evidence-based national guidelines for the dietetic management

of disease and to inform the development of future strategies aimed at the treatment of nutrition-related disease.

Recommendation 24: Research which uses established and new methodologies aimed at the prevention of the major chronic diseases, including obesity, diabetes and cancer is needed.

6.3 Summary

Several reports have identified the importance of the therapy professions in helping to address the policy imperatives in Irish health care. These include the transition of services from acute hospitals to community and home care, the importance of focusing on health promotion and disease prevention, the health impact of lifestyle habits, the need to embrace new technologies in health care and treatment, the involvement of service users as partners in the research, planning and delivery of services, the need for integrated and streamlined services, the reduction of health and social inequalities, and the improvement of access for all to appropriate health care. However, to make a meaningful contribution to this agenda the therapy professions must have a body of knowledge and skills that pertain to their work and are based on the highest quality research. The literature review in Chapter two showed that therapy research in Ireland was not well advanced and for some professions it was in an early stage of development. This fact had been recognised in previous reports from sources such as David Mant (HRB 2006) and the Department of Health and Children (DoHC, 2008) and there had been a call for research priorities to be identified specifically for the therapy professions.

This research team used the Delphi technique to gain consensus among six different therapy professions as to what these research priorities should be. Key stakeholders representing policy makers and managers and service users also got the opportunity to identify research priorities for these professions. Following analysis of the data it was possible to identify the top twenty research priorities for each of these responding groups. A careful study of these priorities showed that there was overlap and repetition across and between groups. It was possible to identify seven recurrent themes across many of the groups. These were: practice evaluation; health promotion; service organisation; clinical academic training; service user perspective; cost effectiveness, and epidemiology. Many of these themes reflected the policies and strategies highlighted in Chapter 1.

This study provides policy makers, health strategists, research funders and therapy professionals with a road map regarding those clinical and professional issues that must be addressed by research as a matter of priority. However, it should be stated that this is time limited and as health care develops, so too will those research topics that should be prioritised. Nonetheless, it is also the first study of its kind that sought to identify research priorities for six different therapy professions and involved service users, managers and policy makers in the process.

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Appendices

Appendix 1: Round One Questionnaire

DELPHI QUESTIONNAIRE: ROUND 1

Identification of Research Priorities for the Therapies Professions in Ireland

Delphi Round One

Please list your answers to the following question. You can list as many answers as you wish and they do not have to be in any particular order.

Question: What are the current research priorities for the Therapy professions?

1.
2.
3.
4.
5.
6.
7.
8.
9.
10.

Demographic Sheet

Name:

Address:

Department / Service Attended:

Organisation Attended:

Setting: please underline: Urban; Rural; Mixed:

Background Details (please type an x beside the relevant boxes)

Are you…	Male	☐	Female	☐
What age are you?	18-24	☐	45-54	☐
	25-34	☐	55-65	☐
	35-44	☐	Over 65	☐

If applicable, please list your dealings with therapy services:

Type Here

If applicable please indicate how long you have been in receipt of therapy services:

Type Here

If applicable, have you used the health service or private practice?

Health Service ☐ Private Practice ☐

Other Service or Both - Please state:

Please indicate which therapies professions you have involvement with:

Chiropody/Podiatry	☐	Orthoptics	☐
Dietetics	☐	Physiotherapy	☐
Occupational Therapy	☐	Speech & Language Therapy	☐
None of the above	☐	Other (please state):	

Thank you for taking the time to complete this first round questionnaire.

Please return the questionnaire by your preferred method: Email or post.

Appendix 2: Example of a Round Two Questionnaire

DELPHI Round 2

Identification of Research Priorities for the Therapy Professions in Ireland

Dear Participant

Please place an X in the box which you feel best describes how important the research topic is. These numbers correspond to a response as below:

1 – Very Unimportant

2 – Quite Unimportant

3 – Neither Important nor Unimportant

4 – Quite Important

5 – Very Important

RESEARCH PRIORITY STATEMENT **1. Very Unimportant 2. Quite Unimportant 3. Neither 4. Quite Important 5. Very Important**	**1 2 3 4 5**
1. Multidisciplinary Working and Service Provision	
1.1 Interdisciplinary / interdisciplinary / transdisciplinary working – achieving client-focused services through collaboration and various models of practice.	☐ ☐ ☐ ☐ ☐
1.2 How to work best as multidisciplinary teams to put research / evidence into practice.	☐ ☐ ☐ ☐ ☐
1.3 Primary Care – integrated pathways and services.	☐ ☐ ☐ ☐ ☐
1.4 Effectiveness of Primary Care Teams in preventing acute hospital admissions.	☐ ☐ ☐ ☐ ☐
1.5 Models of Care e.g. Primary care versus Secondary Care for musculoskeletal outpatient departments.	☐ ☐ ☐ ☐ ☐
1.6 Service delivery models in Primary Care.	☐ ☐ ☐ ☐ ☐
1.7 Profiling specialist services in Ireland: patient and therapist profiles and condition – specific registers.	☐ ☐ ☐ ☐ ☐
1.8 Conduct an evaluation of needs and access to services for a range of conditions e.g. Parkinson's Disease.	☐ ☐ ☐ ☐ ☐
1.9 Research into patient / carer views of service providers.	☐ ☐ ☐ ☐ ☐
1.10 Research into patient attendance, including self referral and DNA rates for particular groups and conditions.	☐ ☐ ☐ ☐ ☐
1.11 Research the differences between treatment in public and private health care systems in Ireland.	☐ ☐ ☐ ☐ ☐
1.12 Implement a quality review of current physiotherapy provision in Ireland, leading to national standardised benchmarks and the identification of gaps / excellence in services.	☐ ☐ ☐ ☐ ☐
1.13 Research the role of the physiotherapist in PCCC in preventive medicine / keeping people out of hospital.	☐ ☐ ☐ ☐ ☐
1.14 Role of physiotherapist as first contact practitioner for musculoskeletal	☐ ☐ ☐ ☐ ☐

RESEARCH PRIORITY STATEMENT **1. Very Unimportant 2. Quite Unimportant 3. Neither 4. Quite Important 5. Very Important**	**1 2 3 4 5**
disorders.	
1.15 Role of physiotherapy within multidisciplinary Primary Care Teams – how to raise the profile of the profession and inform the public nationally and in Europe.	☐ ☐ ☐ ☐ ☐
1.16 Physiotherapy role in reducing disability and improving the quality of life in the older population.	☐ ☐ ☐ ☐ ☐
1.17 Perceptions of other disciplines such as OT and Nursing re- the role of physiotherapy in the neurological care setting.	☐ ☐ ☐ ☐ ☐
1.18 Identify areas of service inequity for post-neurological trauma across a geographical / population basis.	☐ ☐ ☐ ☐ ☐
1.19 Scientific basis to show the benefit of physiotherapy in the management of the hospital (compared with) community based client.	☐ ☐ ☐ ☐ ☐
1.20 Primary Care role of Community physiotherapist.	☐ ☐ ☐ ☐ ☐
1.21 Role of physiotherapist in the management of various conditions and groups: MS; stroke; TOI; Nursing Home residents.	☐ ☐ ☐ ☐ ☐
1.22 Identify resources required for the development of interdisciplinary practices: personal capabilities; professional training; professional guidelines.	☐ ☐ ☐ ☐ ☐
1.23 Research the influence of physiotherapy on policy decisions related to service delivery and patient outcomes.	☐ ☐ ☐ ☐ ☐
2. Cost-Effectiveness of Services	
2.1 Health Economics of therapeutic interventions - identify the cost-effectiveness of therapy intervention and apply to service prioritisation.	☐ ☐ ☐ ☐ ☐
2.2 Cost benefits of additional working hours / days.	☐ ☐ ☐ ☐ ☐
2.3 Research the efficiency and cost-effectiveness of management and resource systems within the profession (staff, time, hardware, software)	☐ ☐ ☐ ☐ ☐
2.4 Cost-effectiveness of hydrotherapy in rheumatological conditions.	☐ ☐ ☐ ☐ ☐
2.5 Conduct a study to ascertain if physiotherapists should have the sole say in budgeting.	☐ ☐ ☐ ☐ ☐
2.6 Assess the economic benefit of educational sessions for those with longstanding conditions i.e. breathlessness / chronic obstructive pulmonary disease, through the impact on number of hospital outpatient visits.	☐ ☐ ☐ ☐ ☐
2.7 Identify a cost-effective, effective national care plan for paediatric orthopaedic services, linking community, medical, nursing, rehabilitation and education services.	☐ ☐ ☐ ☐ ☐
2.8 Identify a cost effective national care plan for obese patients, from respiratory care pre-op to reaching recommended guidelines for physical activity.	☐ ☐ ☐ ☐ ☐
2. 9 Costs and service implications of the effects of obesity on the musculoskeletal system of Irish citizens.	☐ ☐ ☐ ☐ ☐
2.10 Cost benefit analysis of falls prevention in pulmonary rehabilitation programmes.	☐ ☐ ☐ ☐ ☐
3. Health Promotion and Rehabilitation.	
3.1 Role of physiotherapy in health promotion – how best to plan, implement	☐ ☐ ☐ ☐ ☐

RESEARCH PRIORITY STATEMENT **1. Very Unimportant 2. Quite Unimportant 3. Neither 4. Quite Important 5. Very Important**	**1 2 3 4 5**
and evaluate input	
3.2 Role of physiotherapy in disability prevention and lifestyle improvement: extending the role of the Community physiotherapist.	☐ ☐ ☐ ☐ ☐
3.3 Physiotherapy within multidisciplinary approaches to health promotion and prevention of various conditions and events: falls in the elderly; bone health; osteoporosis.	☐ ☐ ☐ ☐ ☐
3.4 Research the effectiveness of various interventions in rehabilitation in chronic disease: respiratory; COPD; cardiovascular disease; stroke.	☐ ☐ ☐ ☐ ☐
3.5 Management of chronic disease in the community: MS, RA, diabetes, disability.	☐ ☐ ☐ ☐ ☐
3.6 Management of mental health.	☐ ☐ ☐ ☐ ☐
3.7 Neurological rehabilitation – acquired and developmental.	☐ ☐ ☐ ☐ ☐
3.8 Technology and rehabilitation (robotics and stroke; PES; virtual reality).	☐ ☐ ☐ ☐ ☐
3.9 How physiotherapists should best work with other staff in continuing care services for older people, including the management of dementia.	☐ ☐ ☐ ☐ ☐
3.10 Research and evaluate stroke rehabilitation, including the effectiveness of home based physiotherapy programmes from a rehabilitation centre post-stroke.	☐ ☐ ☐ ☐ ☐
3.11 Did the stroke patient feel their rehabilitation was affected by the lack of psychological intervention (especially under 65s)?	☐ ☐ ☐ ☐ ☐
3.12 What is the most effective approach / physiotherapy intervention in stroke rehabilitation, including service user perceptions and psycho-social functioning.	☐ ☐ ☐ ☐ ☐
3.13 What is the patient's main goal post-stroke?	☐ ☐ ☐ ☐ ☐
3.14 Uptake of, and adherence to Cardiac Rehabilitation	☐ ☐ ☐ ☐ ☐
3.15 Uptake of, and adherence to Pulmonary Rehabilitation	☐ ☐ ☐ ☐ ☐
4. Evaluation and Evidence Based Practice: Specific Topics	
4.1 Patient satisfaction with community physiotherapy.	☐ ☐ ☐ ☐ ☐
4.2 Research in issues relating to the elderly.	☐ ☐ ☐ ☐ ☐
4.3 Randomised controlled trials for a range of interventions: manipulative therapy; electrotherapy; Bobath versus normal movement; cardio-respiratory techniques.	☐ ☐ ☐ ☐ ☐
4.4 Conduct comparative studies of various interventions and modes: group v individual; conservative v innovative; in musculo-skeletal; in elderly rehabilitation.	☐ ☐ ☐ ☐ ☐
4.5 Conduct a comparative, randomised, controlled trial of respiratory physiotherapy at outpatient versus home treatment for children with cystic fibrosis.	☐ ☐ ☐ ☐ ☐
4.6 Evaluate the effectiveness of physiotherapy intervention in palliative care across all age groups.	☐ ☐ ☐ ☐ ☐
4.7 Research the effectiveness of a maintenance programme of passive movements to minimise contractures in the Alzheimer client group.	☐ ☐ ☐ ☐ ☐
4.8 Assess the clinical effectiveness of manual therapy and establish optimal treatment parameters.	☐ ☐ ☐ ☐ ☐

RESEARCH PRIORITY STATEMENT **1. Very Unimportant 2. Quite Unimportant 3. Neither 4. Quite Important 5. Very Important**	**1**	**2**	**3**	**4**	**5**
4.9 Assess the clinical effectiveness of (patient) education.	☐	☐	☐	☐	☐
4.10 Ascertain the validity and reliability of clinical assessment techniques.	☐	☐	☐	☐	☐
4.11 Evaluate physiotherapy interventions in the treatment of various conditions across age groups: obesity; cardiovascular disease; respiratory conditions.	☐	☐	☐	☐	☐
4.12 The effectiveness of physiotherapy interventions in Intensive Care Units.	☐	☐	☐	☐	☐
4.13 Study to ascertain if pain (reduction) as an outcome measure is a good indicator of patient satisfaction with interventions.	☐	☐	☐	☐	☐
4.14 Best practice in the effective management of chronic pain, low back pain, shoulder pain, including the physical factors involved.	☐	☐	☐	☐	☐
4.15 Research child development and childhood (multiple) disability, including the prevalence of chronic pain and Quality of Life issues.	☐	☐	☐	☐	☐
4.16 Investigate appropriateness / effectiveness of T.E.N.S. in chronic pain in children with disabilities.	☐	☐	☐	☐	☐
4.17 Gait training: compare with versus without treadmill in children with cerebral palsy.	☐	☐	☐	☐	☐
4.18 Identify the physiotherapy needs of children with special needs and their families in Ireland.	☐	☐	☐	☐	☐
4.19 Devise research tools for measuring the effectiveness of physiotherapy intervention i.e. Paediatric Berg balance scale; WeeFIM	☐	☐	☐	☐	☐
4.20 Research into the effects of exercise and balance programmes in Intellectual Disability.	☐	☐	☐	☐	☐
4.21 Modification of standardised assessments and outcome measures among physiotherapists working in intellectual disability:	☐	☐	☐	☐	☐
4.22 Service user satisfaction levels with physiotherapy service in intellectual disability.	☐	☐	☐	☐	☐
4.23 Work-related injury in staff / carers of disabled children.	☐	☐	☐	☐	☐
4.24 Treatment efficacy and programme development for degenerative neurological conditions: MS, Bell's Palsy, Ortega, Polio.	☐	☐	☐	☐	☐
4.25 The efficacy of mobilisation techniques: spinal; neural;	☐	☐	☐	☐	☐
4.26 Trigger point release.	☐	☐	☐	☐	☐
4.27 Effectiveness of various therapies e.g. Constraint Movement Therapy; in paediatric neurology.	☐	☐	☐	☐	☐
4.28 Use of orthotics in children and in Down Syndrome clients - does it prevent long term foot deformity?	☐	☐	☐	☐	☐
4.29 Evaluate aerobic and progressive strengthening classes for a variety of conditions and patient groups e.g. tendonitis, MS.	☐	☐	☐	☐	☐
4.30 Evaluate the effectiveness of 24 hour postural management systems: long term outcomes and effects on prevalence of deformity.	☐	☐	☐	☐	☐
4.31 Establish clinicians' adherence to evidence based guidelines in musculoskeletal physiotherapy.	☐	☐	☐	☐	☐
4.32 Identify prognostic indicators for the development of chronic musculoskeletal pain.	☐	☐	☐	☐	☐
4.33 Effectiveness of physiotherapy in reducing complications post-fracture – therapist input compared with patient input.	☐	☐	☐	☐	☐

RESEARCH PRIORITY STATEMENT **1. Very Unimportant 2. Quite Unimportant 3. Neither 4. Quite Important 5. Very Important**	**1**	**2**	**3**	**4**	**5**
4.34 Effectiveness of physiotherapy for dysfunction of the sacro-iliac joint.	☐	☐	☐	☐	☐
4.35 Effects of transverse friction – treatment of Achilles tendonopathy and lateral epicondylitis.	☐	☐	☐	☐	☐
4.36 Comparative effectiveness of general core stability versus specific trans-abdominal work.	☐	☐	☐	☐	☐
4.37 Physiotherapy treatment of incontinence / constipation and bowel management including diastasis recti abdominus post partum.	☐	☐	☐	☐	☐
4.38 Are lab-based observations replicated in the clinical setting?	☐	☐	☐	☐	☐
4.39 Assess the level of public knowledge / understanding of osteoporosis.	☐	☐	☐	☐	☐
4.40 Investigate causes and treatments in patella femoral pain.	☐	☐	☐	☐	☐
4.41 Effects of tape on pain, muscle activity and kinematics.	☐	☐	☐	☐	☐
4.42 Equine performance and kinematics.	☐	☐	☐	☐	☐
4.43 Investigate the mechanisms of action and effectiveness of various physiotherapy modalities e.g. stretching, across a range of conditions.	☐	☐	☐	☐	☐
4.44 Investigate foot biomechanics and appropriate interventions for foot pain e.g. taping versus orthotic prescription by physiotherapists; orthotics for pronating feet.	☐	☐	☐	☐	☐
4.45 Determine the level of education provided post- breast cancer to identify and deal with onset.	☐	☐	☐	☐	☐
4.46 Impact of breast reconstruction on function: early medium and long term, especially shoulder following lat. Dorsi and abdominal / core stability following tram flap.	☐	☐	☐	☐	☐
4.47 Effects of physiotherapy input on back-to-work ability among post injury / CVA clients.	☐	☐	☐	☐	☐
4.48 Research effective management protocols for low back pain: acute; recurrent; chronic.	☐	☐	☐	☐	☐
4.49 Research the management of spasticity / muscle tightness e.g. effects of botox on gait when applied to gluteus maximus; use of active / passive exercise machines (Motomed); and standing frames.	☐	☐	☐	☐	☐
4.50 Congenital Physical Disability: evaluate physiotherapy interventions in terms of prevention of secondary musculo-skeletal impairments and participation (home, school, community).	☐	☐	☐	☐	☐
4.51 Congenital Physical Disability: evaluate effectiveness of educational programmes for parents of children with cerebral palsy, spina bifida etc.	☐	☐	☐	☐	☐
4.52 Further research into the efficacy of Sensory Integration Therapy.	☐	☐	☐	☐	☐
4.53 Investigate the efficacy and availability of lymphoedema treatments, including factors leading to lymphoedema: e.g. breast cancer and contact sports injuries.	☐	☐	☐	☐	☐
4.54Effectiveness of hydrotherapy in improving quality of life in respiratory function.	☐	☐	☐	☐	☐
4.55 Comparison of land versus water based activity in post-op cerebral palsy.	☐	☐	☐	☐	☐
4.56 Perceived benefits of hydrotherapy for children with moderate to profound intellectual disability e.g. the possible link between increased vocalisations and hydrotherapy.	☐	☐	☐	☐	☐
4.57 Paediatrics and DCD – compare effectiveness of clinic versus home and	☐	☐	☐	☐	☐

RESEARCH PRIORITY STATEMENT **1. Very Unimportant 2. Quite Unimportant 3. Neither 4. Quite Important 5. Very Important**	**1 2 3 4 5**
school based programmes.	
4.58 Investigate / compare the therapeutic effects of different forms of electrotherapy in terms of outcomes e.g. ultrasound, interferential, laser.	☐ ☐ ☐ ☐ ☐
4.59 Evaluate the use of acupuncture in physiotherapy, e.g. the role of acupuncture in centrally maintained pain.	☐ ☐ ☐ ☐ ☐
4.60 Research the effective management of idiopathic toe walking.	☐ ☐ ☐ ☐ ☐
4.61 Research the effectiveness of lycra splinting for scoliosis.	☐ ☐ ☐ ☐ ☐
4.62Compare the effectiveness of weekly sessions versus targeted blocks of interventions for a range of needs.	☐ ☐ ☐ ☐ ☐
4.63 Research the medium and long term impact on balance on elective joint replacement.	☐ ☐ ☐ ☐ ☐
4.64 Research the efficacy of baby massage as part of post natal classes.	☐ ☐ ☐ ☐ ☐
5. Evaluation and Evidence Based Practice: General Statements	
5.1 Develop RCTs of interventions / outcomes in both single and multi-centred projects, across the clinical / academic interface.	☐ ☐ ☐ ☐ ☐
5.2 Integrated laboratory and clinically based research to look at pathology and mechanisms of action for interventions.	☐ ☐ ☐ ☐ ☐
5.3 The underpinning of clinical practice with an evidence base – how best to evaluate interventions.	☐ ☐ ☐ ☐ ☐
5.4 The underpinning of practice with an evidence base – how best to engage / educate clinicians.	☐ ☐ ☐ ☐ ☐
5.5 Identify valid, easy to use outcome measures for all conditions and interventions.	☐ ☐ ☐ ☐ ☐
5.6 Demonstrate that research projects should benefit defined populations with therapeutic endpoints.	☐ ☐ ☐ ☐ ☐
5.7 Development of novel physiotherapeutic interventions.	☐ ☐ ☐ ☐ ☐
5.8 Facilitate and finance clinical research projects (short and long term outcomes / disability measures).	☐ ☐ ☐ ☐ ☐
5.9 Collect standardised clinical data.	☐ ☐ ☐ ☐ ☐
5.10 Investigate the Assessment of Need process.	☐ ☐ ☐ ☐ ☐
6. The Role of Exercise in Prevention, Treatment and Rehabilitation	
6.1 Role of exercise in prevention and treatment of chronic disease.	☐ ☐ ☐ ☐ ☐
6.2 Research the protective effects of regular exercise (aerobic versus local muscular endurance).	☐ ☐ ☐ ☐ ☐
6.3 Identify optimal exercise interventions and evaluate their efficacy for various patient populations / conditions e.g. cancer, neurology, arthritis, pelvic floor dysfunction, obesity, back pain.	☐ ☐ ☐ ☐ ☐
6.4 Aerobic and resistance exercise in the management of osteoporosis / promotion of bone health across a range of conditions e.g. respiratory, cancer, rheumatological conditions.	☐ ☐ ☐ ☐ ☐
6.5 Exercise in the prevention of childhood obesity.	☐ ☐ ☐ ☐ ☐
6.6 Efficacy of aerobic and resistance exercise in promotion of bone health in all age groups.	☐ ☐ ☐ ☐ ☐

RESEARCH PRIORITY STATEMENT **1. Very Unimportant 2. Quite Unimportant 3. Neither 4. Quite Important 5. Very Important**	**1**	**2**	**3**	**4**	**5**
6.7 Further evaluation of exercise in healthy and unhealthy populations.	☐	☐	☐	☐	☐
6.8 Identify possible barriers to exercise.	☐	☐	☐	☐	☐
6.9 Effectiveness of stretching versus warm-up in children (under 16s) in the prevention of injury in sports.	☐	☐	☐	☐	☐
6.10 Develop methods to improve motivation and continued adherence in exercise programmes in various conditions and age groups.	☐	☐	☐	☐	☐
6.11 Develop and evaluate novel methods that use technology to mediate exercise (e.g. sensors, robotics).	☐	☐	☐	☐	☐
6.12 How to develop co-ordinated multidisciplinary / multi-agency approaches to the development of exercise programmes.	☐	☐	☐	☐	☐
6.13 Clarify the role of physiotherapy in exercise prescription and delivery.	☐	☐	☐	☐	☐
7. Professional Issues: Education, Training and Research Capacity					
7.1 Asses the quality of Practice Education placements.	☐	☐	☐	☐	☐
7.2 Assess effectiveness of different models of practice education.	☐	☐	☐	☐	☐
7.3 Assess effectiveness of different models of undergraduate education.	☐	☐	☐	☐	☐
7.4 How to ensure fair, transparent processes of assessment.	☐	☐	☐	☐	☐
7.5 Evaluate effectiveness of inter-disciplinary education.	☐	☐	☐	☐	☐
7.6 Research the impact of multidisciplinary education on quality of life in chronic disease.	☐	☐	☐	☐	☐
7.7 Evaluate the benefits of e-learning for health students.	☐	☐	☐	☐	☐
7.8 Examine the undergraduate curriculum: should acupuncture be added?	☐	☐	☐	☐	☐
7.9 Research how students reason and learn.	☐	☐	☐	☐	☐
7.10 Evaluate undergraduate physiotherapy programmes in terms of today's service user.	☐	☐	☐	☐	☐
7.11 Compare degree level physiotherapy programmes with other courses in physical therapy and sports injury.	☐	☐	☐	☐	☐
7.12 Research to investigate if business skills should be added to the undergraduate curriculum e.g. management training by business graduates.	☐	☐	☐	☐	☐
7.13 Increase research capacity through an increase in number of graduates with PhDs.	☐	☐	☐	☐	☐
7.14 Increase research capacity through career development / protected research time for clinicians / 'research activity' as a required component of clinical roles.	☐	☐	☐	☐	☐
7.15 Create joint positions – lecturer / practitioner.	☐	☐	☐	☐	☐
7.16 Create further clinical grades i.e. advanced practitioner / prescribing / consultant.	☐	☐	☐	☐	☐
7.17 Create a career pathway that rewards further education.	☐	☐	☐	☐	☐
7.18 Ensure that researchers are equipped with the resources necessary to compete on the world stage and ensure exportability of graduates.	☐	☐	☐	☐	☐
7.19 Explore the effectiveness of clinical appraisal systems in career development.	☐	☐	☐	☐	☐
7.20 Strategic review of profession – investigate if specialist nurses are taking over the physiotherapy role.	☐	☐	☐	☐	☐
7.21 Research job satisfaction levels among physiotherapists.	☐	☐	☐	☐	☐

RESEARCH PRIORITY STATEMENT **1. Very Unimportant 2. Quite Unimportant 3. Neither 4. Quite Important 5. Very Important**	**1 2 3 4 5**
7.22 Research the balance of clinical work versus service development in the Continuing Professional Development of physiotherapists.	☐ ☐ ☐ ☐ ☐
7.23 Establish how far Continuing Professional Development (CPD) is supported by employers.	☐ ☐ ☐ ☐ ☐
7.24 Explore how to ensure that research is a focus in Continuing Professional Development (CPD).	☐ ☐ ☐ ☐ ☐
7.25 Explore how best to use allocated CPD time within the Health Service.	☐ ☐ ☐ ☐ ☐
7.26 Research effects of peer support and mentoring / coaching practice for physiotherapists.	☐ ☐ ☐ ☐ ☐
7.27 ICT in physiotherapy.	☐ ☐ ☐ ☐ ☐
7.28 Funding should be ring-fenced for research activity in the therapies.	☐ ☐ ☐ ☐ ☐
7.29 Students' perceptions of the learning experience and feedback received in classroom versus clinical setting.	☐ ☐ ☐ ☐ ☐
7.30 Analysis of whether increased support for students has improved immediate post graduate performance at work.	☐ ☐ ☐ ☐ ☐
7.31 Students' ability to transfer knowledge and skills from practical classes to the clinical setting.	☐ ☐ ☐ ☐ ☐
7.32 Perceptions of students, educators and managers on new practice tutor posts.	☐ ☐ ☐ ☐ ☐
7.33 Research curriculum issues: 'Affective'; Ethics and Law; Spirituality; Art or Science?	☐ ☐ ☐ ☐ ☐
7.34 Examine the question of the Chartered Physiotherapist as a professional entrepreneur.	☐ ☐ ☐ ☐ ☐
7.35 Define expected practice capacities of undergraduate versus post-graduate students.	☐ ☐ ☐ ☐ ☐
7.36 Define the special contribution of physiotherapists in specific settings e.g. ITU, paediatrics, women's health.	☐ ☐ ☐ ☐ ☐
7.37 Research threats and opportunities for the profession.	☐ ☐ ☐ ☐ ☐
7.38 Research the incidence of violence in the workplace.	☐ ☐ ☐ ☐ ☐
7.39 Assess the impact of moving and handling training on injuries in the workplace.	☐ ☐ ☐ ☐ ☐

Appendix 3: Example of a Round Three Questionnaire

Speech and Language Therapy Panel: Round 3 Delphi Questionnaire

Research Priorities for the Therapy Professions

RESEARCH PRIORITY TOPICS: Speech and Language Therapy PANEL Round 3 **1. Very Unimportant 2. Quite Unimportant 3. Neither 4. Quite Important 5. Very Important**	**Group Score**	**Your Score**	**1 2 3 4 5**	**S – Short term M – Med Term L – Long Term** **S M L**
1. Service Delivery Models.				
1.4 Compare Primary Care Services versus Specialist Teams in terms of best outcomes for children with disabilities at pre-school level.	4	4	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐
1.6 Develop links across the Health and Educational systems that focus on children rather that disability.	4	2	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐
1.12 Evaluate early intervention for clients with disabilities in terms of cost-effectiveness for different models used.	4	4	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐
1.14 Development of agreed models / guidelines for the recording and management of service data such as waiting lists, programme duration and therapy outcomes.	4	4	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐
1.15 Compare 'MACS' with traditional practices in the management of waiting lists.	3	3	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐
1.17 Investigate waiting list discrepancies in different parts of the country.	4	3	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐
1.18 Research ways of reducing inappropriate referrals for occupational therapy Services.	3	2	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐
1.19 Research ways of reducing high 'failure to attend' rates for occupational therapy Services.	4	4	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐
1.20 Identify optimum levels for factors related to workforce planning e.g. caseload size; staff grades and skill mixes; levels of care from primary through to tertiary.	4	3	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐
1.22 Establish links between Ireland and	3	3	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐

RESEARCH PRIORITY TOPICS: Speech and Language Therapy PANEL Round 3 **1. Very Unimportant 2. Quite Unimportant 3. Neither 4. Quite Important 5. Very Important**	**Group Score**	**Your Score**	**1 2 3 4 5**	**S – Short term M – Med Term L – Long Term** **S M L**
Northern Ireland.				
2. Evidence Based Practice: General				
2.5 Compare outcomes from multidisciplinary versus unidisciplinary intervention.	4	3	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐
2.7 Develop effective links between needs assessment and intervention delivery for children with disabilities / developmental delay.	4	4	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐
2.8 Identify factors that can assist in deciding prognosis.	4	3	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐
2.13 Basic Pathology / Science Research – investigate the nature of disorders e.g. through neuroscience / brain imaging / genetics research.	4	4	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐
2.14 Develop theoretical frameworks to explain and inform the impact of therapy e.g. phonological theory related to phonological disorder.	4	2	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐
2.15 Relate interactionist – constructivist theories of language development to the development of assessments and interventions for children with speech, language and communication difficulties.	3	5	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐
2.17 Investigate the working of multidisciplinary / interdisciplinary teams for all disorders and across a range of settings: community, acute, sub-acute; early intervention.	4	3	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐
2.20 Conduct large scale, rigorous RCTs to compare various treatments.	4	2	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐
2.27 Undertake interdisciplinary research to explore health professionals' use of assessment tools and diagnostic frameworks for children with complex needs.	4	5	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐
2.28 Research the prevalence and efficacy of diagnostic labels in the context of co-morbidity e.g. SLI with ADHD; SLI and DCD.	4	5	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐

RESEARCH PRIORITY TOPICS: Speech and Language Therapy PANEL Round 3 **1. Very Unimportant 2. Quite Unimportant 3. Neither 4. Quite Important 5. Very Important**	**Group Score**	**Your Score**	**1 2 3 4 5**	**S – Short term M – Med Term L – Long Term** **S M L**
3. Evidence Based Practice: Specific				
3.1 Analyse clinical discourse: how therapy is implemented through talk, 'small talk, 'conversation partners'.	3	3	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐
3.2 Establish factors that contribute to the quality of therapist / therapeutic relationship e.g. from clients' perspectives.	4	3	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐
3.3 Research effectiveness of, and how best to deliver, social skills interventions for children with speech and language difficulties.	4	4	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐
3.6 Comparative research on roles of therapy agents: teacher / parent / SLT assistant / individual therapy with occupational therapist.	4	5	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐
3.7 Research on the representation of communication difficulties in the media.	3	4	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐
3.8 Research on the availability of occupational therapy for various age groups with communication difficulties, as distributed across the country.	4	3	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐
3.15 Research cultural expectations of occupational therapy by foreign nationals.	4	4	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐
3.16. Research attitudes and beliefs of therapists with regard to multi-cultural populations and contexts, and in relation to the application of the ICF model.	4	4	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐
3.17 Examine the impact of pavee and gender on clinical discourse.	3	3	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐
3.18 Comparative research in language and auditory processing: in normal language acquisition; in second language acquisition; in children with language difficulty; in aphasia; in dyslexia; in schizophrenia.	4	4	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐
3.19 Research in normal development of communicative, cognitive and literacy / vocabulary skills.	3.5	3	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐
3.23 Test the effectiveness of the model	4	3	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐

RESEARCH PRIORITY TOPICS: Speech and Language Therapy PANEL Round 3 **1. Very Unimportant 2. Quite Unimportant 3. Neither 4. Quite Important 5. Very Important**	**Group Score**	**Your Score**	**1 2 3 4 5**	**S – Short term M – Med Term L – Long Term** **S M L**
that advocates universal screening of all children for speech and language difficulty.				
3.24 Implement a study to investigate the question: 'Do premature babies have a decline in feeding at 37 weeks (growth spurt)?'	3	3	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐
3.25 Implement a longitudinal study on specific language impairment (SLI) to identify risk markers and outcomes as children move to adulthood.	4	3	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐
3.27 Examine the current state of research in relation to impairment therapy in aphasia.	4	5	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐
3.29 Compare the effectiveness of different approaches to the management of hyper- / hypo-nasality.	4	4	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐
3.33 Address the gap in relation to effectiveness of speech and language therapy for comprehension and production difficulties especially beyond pre school.	3.5	5	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐
3.34 Investigate the 'teaching versus testing' dilemma in SLT.	3	3	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐
3.35 Compare clinic-based versus school-based services in terms of best outcomes for children.	4	4	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐
3.37 Investigate the effectiveness of the SPARCC type approach in early and mid-stage dementia.	4	4	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐
3.38 Investigate the incidence of, and provision for, dysphagia (swallowing difficulties) in the population in terms of specific groups e.g. intellectual disability, post-stroke, children.	4	3	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐
3.39 Develop assessment procedures and outcome measures for various SLT treatments in dysphagia (functional and psychological).	4	3	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐
3.40 Research the effectiveness of various SLT interventions for dysphagia such as	4	2	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐

RESEARCH PRIORITY TOPICS: Speech and Language Therapy PANEL Round 3 **1. Very Unimportant 2. Quite Unimportant 3. Neither 4. Quite Important 5. Very Important**	**Group Score**	**Your Score**	**1 2 3 4 5**	**S – Short term M – Med Term L – Long Term** **S M L**
cervical auscultation and DPNS.				
3.41 Investigate the role of SLT in severe cerebral palsy.	3	3	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐
3.42 Investigate the role of SLT in post-traumatic amnesia (PTA).	3	3	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐
3.47 Evaluate therapies and tools used in clinical practice in light of the question: 'Are Speech and Language therapists technicians or professionals?'	3	3	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐
3.49 Investigate the effectiveness of Total Communication Approach in the classroom.	4	2	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐
3.54 Investigate reasons for the lack of ICT – web technology use to enhance speech and language therapy practice and develop its use for clients in outlying areas.	4	3	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐
3.55 Research to investigate the issue of return to work for people with additional needs.	3	3	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐
3.56 Investigate the efficacy of ACC in vent or trachi patients.	4	4	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐
4. Education, Research Capacity and Professional Issues.				
4.3 Analyse or outline the components of an undergraduate SLT programme in terms of course standards, CE, CPD, academic and clinical viewpoints.	3	3	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐
4.7 Look at the provision of specialist posts in speech and language therapy e.g. there is only one post in the Irish Republic for stammering disorders.	4	3	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐
4.8 Examine the process of transitioning to work.	3	2	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐
4.9 Examine the issue of mature students e.g. the number 'allowed' to train in Ireland.	3	2	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐
4.10 Address the perceived lack of postgraduate training for speech and language therapy.	3	4	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐

RESEARCH PRIORITY TOPICS: Speech and Language Therapy PANEL Round 3 **1. Very Unimportant 2. Quite Unimportant 3. Neither 4. Quite Important 5. Very Important**	**Group Score**	**Your Score**	**1 2 3 4 5**	**S – Short term M – Med Term L – Long Term** **S M L**
4.11 Investigate the issue of non-qualified people engaged in advertising and running speech therapy practices and courses in the private sector.	4	3	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐

Appendix 4: Full Results Tables for Physiotherapy Panel

Ranked by Mean indicating Importance of each Priority

Items that gained consensus at Round 2 (ranked by mean)

RESEARCH PRIORITY	Mean	Consensus Level
Research on how best to create a career pathway that rewards further education.	4.49	89.1%
Research the effectiveness of various interventions in rehabilitation in chronic disease: respiratory; COPD; cardiovascular disease; stroke.	4.42	92.7%
Research the effectiveness of Primary Care Teams and physiotherapy in preventing acute hospital admissions.	4.42	92.7%
The underpinning of clinical practice with an evidence base – how best to evaluate interventions.	4.42	87.2%
Identify optimal exercise interventions and evaluate their efficacy for the prevention and management of chronic disease for various patient population, across the age ranges.	4.40	89.1%
Research the physiotherapy role in reducing disability and improving the quality of life in the older population.	4.38	92.7%
Evaluate the role of exercise in prevention and treatment of chronic disease.	4.36	92.8%
Evaluate the role of exercise in the prevention of childhood obesity.	4.36	87.2%
Evaluate the role of physiotherapy within multidisciplinary approaches to health promotion and prevention of various conditions and events: falls in the elderly; bone health; osteoporosis.	4.31	89.1%
Randomised controlled trials for a range of interventions: manipulative therapy; electrotherapy; Bobath versus normal movement; cardio-respiratory techniques.	4.31	85.5%
Evaluate how to increase research capacity through career development / protected research time for clinicians / 'research activity' as a required component of clinical roles.	4.25	85.5%
Ascertain the validity and reliability of clinical assessment techniques.	4.22	85.5%
Conduct comparative studies of various interventions and modes: group v individual; conservative v innovative; in musculo-skeletal; in elderly rehabilitation.	4.22	81.8%
Health Economics of therapeutic interventions - identify the cost-effectiveness of therapy intervention and apply to service prioritisation.	4.20	87.3%
Research and evaluate stroke rehabilitation, including the effectiveness of home based physiotherapy programmes from a rehabilitation centre post-stroke.	4.20	85.5%
Evaluate the effectiveness of physiotherapy interventions in Intensive Care Units.	4.20	81.8%
Ensure that researchers are equipped with the resources necessary to compete on the world stage and ensure exportability of graduates.	4.20	78.1%
Evaluate aerobic and resistance exercise in the management of osteoporosis / promotion of bone health across a range of conditions e.g. respiratory, cancer, rheumatological conditions.	4.18	87.2%

RESEARCH PRIORITY	Mean	Consensus Level
Role of physiotherapy in health promotion – how best to plan, implement and evaluate input	4.18	78.2%
Implement a quality review of current physiotherapy provision in Ireland, leading to national standardised benchmarks and the identification of gaps / excellence in services.	4.18	74.5%
Identify and evaluate valid, quantifiable, easy to use outcome measures for all conditions and interventions.	4.15	80.0%
Integrated laboratory and clinically based research to look at pathology and mechanisms of action for interventions.	4.15	76.3%
Evaluate the efficacy of aerobic and resistance exercise in promotion of bone health in all age groups.	4.13	83.6%
Investigate the role of physiotherapist as first contact practitioner for musculoskeletal disorders.	4.13	80.0%
Identify best practice in the effective management of chronic pain, low back pain, shoulder pain, including the physical factors involved.	4.13	76.4%
Research into the role of physiotherapy in disability prevention and lifestyle improvement: extending the role of the Community physiotherapist.	4.11	81.9%
Develop methods to improve motivation and continued adherence in exercise programmes in various conditions and age groups.	4.11	80.0%
Research the protective effects of regular exercise (aerobic versus local muscular endurance).	4.05	80.0%
Assess the clinical effectiveness of (patient) education.	4.05	76.3%
Primary Care – investigate integrated pathways and services.	4.05	72.8%
Multidisciplinary / interdisciplinary / transdisciplinary working – research around achieving client-focused services through collaboration and various models of practice.	4.04	78.2%
Conduct a comparative, randomised, controlled trial of respiratory physiotherapy at outpatient versus home treatment for children with cystic fibrosis.	4.04	76.3%
Conduct an evaluation of needs and access to services for a range of conditions e.g. Parkinson's Disease.	4.02	76.9%
Neurological rehabilitation research – acquired and developmental.	4.02	70.9%
Assess the quality of Practice Education placements.	4.00	80.0%
What is the patient's main goal post-stroke?	4.00	71.8%
Scientific basis to show the benefit of physiotherapy in the management of the hospital (compared with) community based client	4.00	70.0%
Effects of physiotherapy input on back-to-work ability among post injury / CVA clients.	3.98	78.2%
Facilitate and finance clinical research projects on short and long term outcomes / disability measures.	3.98	72.7%
How to work best as multidisciplinary teams to link research from different disciplines and to put research / evidence into practice.	3.96	74.6%
Role of physiotherapy within multidisciplinary Primary Care Teams – how to raise the profile of the profession and inform the public nationally and in Europe.	3.96	74.5%

RESEARCH PRIORITY	Mean	Consensus Level
Compare the effectiveness of weekly sessions versus targeted blocks of interventions for a range of needs.	3.95	70.9%
Research into patient / carer views of service providers.	3.93	72.8%
Research effective management protocols for low back pain: acute; recurrent; chronic.	3.93	70.9%
Evaluate the effectiveness of physiotherapy intervention in palliative care across all age groups.	3.89	76.4%
Research child development and childhood (multiple) disability, including the prevalence of chronic pain and Quality of Life issues.	3.87	70.9%
Establish clinicians' adherence to evidence based guidelines in musculoskeletal physiotherapy.	3.85	72.7%
Assess effectiveness of different models of undergraduate education.	3.85	70.9%
Assess effectiveness of different models of practice education.	3.84	74.5%
The efficacy of mobilisation techniques: spinal; neural;	3.82	70.9%
Identify prognostic indicators for the development of chronic musculoskeletal pain.	3.82	70.9%
Investigate treatment efficacy and programme development for degenerative neurological conditions: MS, Bell's Palsy, Ortega, Polio.	3.78	70.9%

Items that gained consensus at Round 3 (ranked by mean)

RESEARCH PRIORITY	Mean	Consensus Level
The underpinning of practice with an evidence base – how best to engage / educate clinicians.	4.29	85.5%
Research around the creation of further clinical grades i.e. advanced practitioner / prescribing / consultant.	4.20	83.6%
Evaluate the management of chronic disease in the community: MS, RA, diabetes, disability.	4.15	91.0%
Further evaluation of exercise in healthy and unhealthy populations.	3.96	74.6%
Identify the physiotherapy needs of children with special needs and their families in Ireland.	3.93	78.2%
Evaluate aerobic and progressive strengthening classes for a variety of conditions and patient groups e.g. tendonitis, MS.	3.93	74.5%
Investigate the costs and service implications of the effects of obesity on the musculoskeletal system of Irish citizens.	3.89	72.7%
Explore the effectiveness of clinical appraisal systems in career development.	3.87	70.9%
Identify areas of service inequity for post-neurological trauma across a geographical / population basis.	3.85	72.7%
Clarify the role of physiotherapy in exercise prescription and delivery.	3.85	70.9%
Investigate the cost benefits of additional working hours / days.	3.82	70.9%
Congenital Physical Disability: evaluate effectiveness of educational programmes for parents of children with cerebral palsy, spina bifida etc.	3.80	72.8%
Evaluate physiotherapy treatment of incontinence / constipation and bowel	3.78	72.7%

RESEARCH PRIORITY	Mean	Consensus Level
management including diastasis recti abdominus post partum.		
Research into service delivery models in Primary Care.	3.76	72.7%
Assess the clinical effectiveness of manual therapy and establish optimal treatment parameters.	3.75	70.9%
Research effects of peer support and mentoring / coaching practice for physiotherapists.	3.75	70.9%
Investigate foot biomechanics and appropriate interventions for foot pain e.g. taping versus orthotic prescription by physiotherapists; orthotics for pronating feet.	3.71	72.7%
Research the uptake of and adherence to Cardiac Rehabilitation.	3.71	72.6%

Items that did not gain consensus (ranked by mean)

RESEARCH PRIORITY	Mean	Consensus Level
Identify possible barriers to exercise.	3.96	69.1%
Research threats and opportunities for the profession.	3.91	67.3%
Evaluate the effectiveness of 24 hour postural management systems: long term outcomes and effects on prevalence of deformity.	3.91	67.2%
Identify a cost effective national care plan for obese patients, from respiratory care pre-op to reaching recommended guidelines for physical activity.	3.85	69.1%
Study to ascertain if pain (reduction) as an outcome measure is a good indicator of patient satisfaction with interventions.	3.85	69.1%
Research how to set up a system to collect standardised clinical data.	3.85	69.1%
Evaluate undergraduate physiotherapy programmes in terms of today's service user.	3.84	65.5%
Research the efficiency and cost-effectiveness of management and resource systems within the profession (staff, time, hardware, software)	3.82	65.4%
Identify a cost-effective, effective national care plan for paediatric orthopaedic services, linking community, medical, nursing, rehabilitation and education services.	3.82	65.4%
Research into technology and rehabilitation (robotics and stroke; PES; virtual reality).	3.80	69.1%
Evaluate effectiveness of inter-disciplinary education.	3.80	67.3%
How to develop co-ordinated multidisciplinary / multi-agency approaches to the development of exercise programmes.	3.80	67.2%
Devise a goal based system that links outcomes with therapeutic inputs for specific functional levels and diagnostic groups.	3.80	65.5%
Strategic review of profession – investigate if specialist nurses are taking over the physiotherapy role.	3.78	63.7%
Demonstrate that research projects should benefit defined populations with therapeutic endpoints.	3.78	63.6%
What is the most effective approach / physiotherapy intervention in stroke rehabilitation, including service user perceptions and psycho-social functioning.	3.78	61.9%
Increase research capacity through an increase in number of graduates with	3.76	67.3%

RESEARCH PRIORITY	Mean	Consensus Level
PhDs.		
Assess the economic benefit of educational sessions for those with longstanding conditions i.e. breathlessness / chronic obstructive pulmonary disease, through the impact on number of hospital outpatient visits.	3.76	67.2%
Research the management of spasticity / muscle tightness e.g. effects of botox on gait when applied to gluteus maximus; use of active / passive exercise machines (Motomed); and standing frames.	3.76	65.5%
Use of orthotics in children and in Down Syndrome clients - does it prevent long term foot deformity?	3.75	65.4%
Devise research tools for measuring the effectiveness of physiotherapy intervention i.e. Paediatric Berg balance scale; WeeFIM	3.73	67.3%
Research into how to ensure fair, transparent processes of assessment.	3.73	67.3%
Investigate students' ability to transfer knowledge and skills from practical classes to the clinical setting.	3.73	60.0%
Research into ICT in physiotherapy, notably the accessing of full-text electronic journals by clinicians.	3.71	67.3%
What is the patient's main goal post-stroke?	3.71	61.8%
Research in issues relating to the elderly.	3.69	67.3%
Explore how to ensure that research is a focus in Continuing Professional Development (CPD).	3.69	65.4%
Uptake of and adherence to Pulmonary rehabilitation.	3.69	63.6%
Evaluate the use of acupuncture in physiotherapy, e.g. the role of acupuncture in centrally maintained pain.	3.69	61.8%
Scientific basis to show the benefit of physiotherapy in the management of the hospital (compared with) community based client.	3.69	60.0%
Research the balance of clinical work versus service development in the Continuing Professional Development of physiotherapists.	3.67	69.1%
Research the effectiveness of physiotherapy in reducing complications post-fracture – therapist input compared with patient input.	3.67	65.5%
Evaluate models of Care e.g. Primary care versus Secondary Care for musculoskeletal outpatient departments.	3.67	61.8%
Research into patient attendance, including self referral and DNA rates for particular groups and conditions.	3.67	61.8%
Profiling specialist services in Ireland: patient and therapist profiles and condition – funding for specific registers.	3.67	60.0%
Evaluate the Primary Care role of Community Physiotherapist.	3.67	60.0%
Research the influence of physiotherapy on policy decisions related to service delivery and patient outcomes.	3.65	63.6%
Investigate the mechanisms of action and effectiveness of various physiotherapy modalities e.g. stretching, across a range of conditions.	3.65	63.6%
Establish how far Continuing Professional Development (CPD) is supported by employers.	3.65	61.9%
Research Congenital Physical Disability: evaluate physiotherapy interventions in terms of prevention of secondary musculo-skeletal impairments and participation (home, school, community).	3.65	61.8%

RESEARCH PRIORITY	Mean	Consensus Level
Research the impact of multidisciplinary education on quality of life in chronic disease.	3.65	61.8%
Define the special contribution of physiotherapists in specific settings e.g. ITU, paediatrics, women's health.	3.65	60.0%
Evaluate Patient satisfaction with community physiotherapy.	3.64	61.8%
Research the modification of standardised assessments and outcome measures among physiotherapists working in intellectual disability:	3.64	58.2%
Investigate the Assessment of Need process.	3.64	54.5%
Evaluate the effectiveness of various therapies e.g.Constraint Movement Therapy; in paediatric neurology.	3.62	60.0%
Research into the effects of exercise and balance programmes in Intellectual Disability.	3.62	58.1%
Explore how best to use allocated CPD time within the Health Service.	3.60	60.0%
Investigate the role of physiotherapist in the management of various conditions and groups: MS; stroke; TOI; Nursing Home residents.	3.58	61.8%
Investigate the efficacy and availability of lymphoedema treatments, including factors leading to lymphoedema: e.g. breast cancer and contact sports injuries.	3.56	61.8%
Identify the comparative effectiveness of general core stability versus specific trans-abdominal work.	3.56	60.0%
Investigate work-related injury in staff / carers of disabled children.	3.56	56.4%
Develop and evaluate novel methods that use technology to mediate exercise (e.g. sensors, robotics).	3.56	56.4%
Identify the impact of breast reconstruction on function: early medium and long term, especially shoulder following lat. Dorsi and abdominal / core stability following tram flap.	3.55	60.0%
Paediatrics and DCD – compare effectiveness of clinic versus home and school based programmes.	3.55	54.6%
Evaluate the effects of tape on pain, muscle activity and kinematics.	3.53	60.0%
Evaluate the benefits of e-learning for health students.	3.53	56.4%
Assess the impact of moving and handling training on injuries in the workplace.	3.51	66.4%
Identify the cost-effectiveness of hydrotherapy in rheumatological conditions.	3.51	60.0%
Assess the perceptions of students, educators and managers on new practice tutor posts.	3.51	58.2%
Investigate the management of mental health.	3.51	45.5%
Identify the effectiveness of physiotherapy for dysfunction of the sacro-iliac joint.	3.49	58.2%
Identify resources required for the development of interdisciplinary practices: personal capabilities; professional training; professional guidelines.	3.49	56.4%
Compare land versus water based activity in post-op cerebral palsy.	3.47	58.2%
Did the stroke patient feel their rehabilitation was affected by the lack of psychological intervention (especially under 65s)?	3.45	54.6%
Research the effective management of idiopathic toe walking.	3.45	54.6%

RESEARCH PRIORITY	Mean	Consensus Level
Complete a cost benefit analysis of falls prevention in pulmonary rehabilitation programmes.	3.45	45.4%
Assess the level of public knowledge / understanding of osteoporosis.	3.44	54.6%
Further research into the efficacy of Sensory Integration Therapy.	3.42	52.7%
Research job satisfaction levels among physiotherapists.	3.40	40.0%
Research students' perceptions of the learning experience and feedback received in classroom versus clinical setting.	3.40	40.0%
Research the differences between treatment in public and private health care systems in Ireland.	3.38	43.7%
Identify service user satisfaction levels with physiotherapy service in intellectual disability.	3.38	41.9%
Define expected practice capacities of undergraduate versus post-graduate students.	3.38	41.8%
Research how students reason and learn.	3.36	41.8%
Analysis of whether increased support for students has improved immediate post graduate performance at work.	3.35	40.0%
Research the medium and long term impact on balance on elective joint replacement.	3.33	40.0%
Are lab-based observations replicated in the clinical setting?	3.31	38.2%
How physiotherapists should best work with other staff in continuing care services for older people, including the management of dementia.	3.29	38.2%
Research the perceived benefits of hydrotherapy for children with moderate to profound intellectual disability e.g. the possible link between increased vocalisations and hydrotherapy.	3.29	38.2%
Gait training: compare with versus without treadmill in children with cerebral palsy.	3.29	32.7%
Research the development of novel physiotherapeutic interventions.	3.25	36.3%
Identify the perceptions of other disciplines such as OT and Nursing re- the role of physiotherapy in the neurological care setting.	3.24	38.2%
Compare degree level physiotherapy programmes with other courses in physical therapy and sports injury.	3.24	38.2%
Research the effectiveness of lycra splinting for scoliosis.	3.20	40.0%
Investigate causes and treatments in patella femoral pain.	3.20	34.6%
Research to investigate if business skills should be added to the undergraduate curriculum e.g. management training by business graduates.	3.18	40.0%
Identify the effectiveness of hydrotherapy in improving quality of life in respiratory function.	3.16	30.9%
Investigate / compare the therapeutic effects of different forms of electrotherapy in terms of outcomes e.g. ultrasound, interferential, laser.	3.15	34.5%
Investigate appropriateness / effectiveness of T.E.N.S. in chronic pain in children with disabilities.	3.13	34.6%
Determine the level of education provided post- breast cancer to identify and deal with onset.	3.13	27.2%
Determine the effectiveness of stretching versus warm-up in children (under	3.11	32.7%

RESEARCH PRIORITY	Mean	Consensus Level
16s) in the prevention of injury in sports.		
Investigate trigger point release.	3.07	32.7%
Examine the undergraduate curriculum: should acupuncture be added?	3.04	32.8%
Research the effectiveness of a maintenance programme of passive movements to minimise contractures in the Alzheimer client group.	3.02	25.4%
Evaluate the effects of transverse friction – treatment of Achilles tendonopathy and lateral epicondylitis.	3.00	29.1%
Examine the question of the Chartered Physiotherapist as a professional entrepreneur.	2.96	29.1%
Research curriculum issues: 'Affective'; Ethics and Law; Spirituality; Art or Science?	2.84	23.6%
Research the incidence of violence in the workplace.	2.82	28.2%
Conduct a study to ascertain if physiotherapists should have the sole say in budgeting.	2.75	18.2%
Research the efficacy of baby massage as part of post natal classes.	2.73	16.4%
Evaluate equine performance and kinematics.	2.22	14.6%

Appendix 5: Full Results Tables for Occupational Therapy Panel

Ranked by mean indicating Level of Importance of each Priority

Items that gained consensus at Round 2 (ranked by mean)

RESEARCH PRIORITY	Mean	Consensus Level
Develop pre and post tools and measures to test specifically for changes in occupational performance as a result of occupational therapy intervention.	4.50	91.2%
Evaluate the quantitative evidence for the effectiveness and efficacy of a variety of occupation based occupational therapy interventions and outcomes.	4.47	88.3%
Identify the ways in which occupational therapy interventions assist in keeping elders home longer, e.g. improved mobility.	4.44	94.2%
Research into occupational factors that promote health and well-being across a diverse range of areas (e.g. obesity prevention; mental health and well-being).	4.35	85.3%
Seek qualitative evidence for the efficacy of a variety of interventions.	4.35	85.3%
Investigate the cost effectiveness of OT intervention in community care for dementia.	4.29	88.3%
Investigate the perceptions and experiences of service users regarding the effectiveness of multidisciplinary working.	4.29	85.3%
Investigate the cost effectiveness of therapies professions in facilitating early discharge.	4.26	85.3%
Investigate the link between meaningful occupation, health and well-being.	4.26	82.3%
Investigate the impact of occupation in positive ageing.	4.24	85.3%
Assess the effectiveness of vocational rehabilitation generally (including mental health)	4.24	85.3%
Develop systems to monitor and track success factors for independent living and falls prevention (including the elderly population and those with dementia)	4.21	79.4%
Research the evidence base for a the effectiveness of variety of rehabilitation treatments (splinting, seating equipment, teamwork) in acute paediatric conditions (e.g. CVA, encephalitis)	4.18	79.4%
Qualitative, experiential studies of service users' experiences of receiving occupational therapy.	4.18	79.4%
Research the impact of environmental intervention on occupation.	4.12	73.6%
Investigate the scope of occupational therapy in emerging areas of practice: prisons, housing planning, schools and pre-schools, neonatology.	4.09	79.5%
Research ways to increase and apply evidence based practice, including case studies and skills usage.	4.09	73.5%
Identify occupationally based, clinical assessment and outcome measures, from structured to unstructured and from standardised to non-standardised.	4.06	76.5%
Research best methods to enhance multidisciplinary assessments and interventions including reviews	4.05	73.7%
Identify the potential health promoting properties of participation in occupation in well / healthy populations.	4.03	73.5%
Investigate the role of occupational therapy in policy development at a national	4.03	73.5%

RESEARCH PRIORITY	Mean	Consensus Level
level.		
Evaluate the effectiveness of splinting in e.g. neurological impairment and paediatric rheumatology.	4.03	70.6%
Research the place of psychosocial interventions in the delivery of occupational therapy within Primary Care	4.00	70.6%
Assess the effectiveness of life skills training by occupational therapists in a mental health rehabilitation team.	3.97	73.6%
Investigate ways to enhance client-centredness in service delivery.	3.91	70.6%
Investigate the impact of occupational therapy in cognitive and functional impairment following CVA, ABI, spinal cord injury.	3.91	70.6%
Identify potential barriers to service uptake among marginalised populations such as in mental health, travellers, refugees, low income citizens.	3.88	73.6%
Identify methods to prioritise service provision in dementia, stroke, brain injury and other chronic conditions.	3.88	73.6%
Define the global role versus the specific role of occupational therapy in Primary Care and early intervention teams and networks.	3.82	70.6%
Identify the role of occupational therapy in child and adolescent mental health, including the effectiveness of vocational training.	3.82	70.6%
Compare evidence on the use of neurological techniques (NDT, Bobath) in occupational therapy versus spontaneous recovery in acute stroke patients.	3.76	70.6%

Items that gained consensus at Round 3 (ranked by mean)

RESEARCH PRIORITY	Mean	Consensus Level
Examine the educational needs of occupational therapists post-qualification.	3.91	70.6%
Evaluate actual and potential evidence base for occupational therapy input for children with ADHD, ASD and Asperger's syndrome in Ireland.	3.88	73.6%
Investigate clinical reasoning in practice and the necessary skills / tools required.	3.88	73.6%
Research how to implement improved inter-professional delivery.	3.88	73.5%
Evaluate the evidence that occupational therapy enhances quality of life	3.85	76.5%
Research best methods to enhance multidisciplinary assessments and interventions, including reviews.	3.85	73.5%

Items that did not gain consensus (ranked by mean)

RESEARCH PRIORITY	Mean	Consensus Level
Evaluate the input of occupational therapists within the school system e.g. special needs assessment, behavioural management, environmental design, functional skills.	3.97	67.7%
Assess the validity and effectiveness of specific treatments e.g. perceptual-motor and sensory integration in various neurological conditions, across a range of age groups.	3.97	67.7%

RESEARCH PRIORITY	Mean	Consensus Level
Evaluate the effectiveness of the remedial approach for clients with neurological conditions.	3.91	67.7%
Study the impact of progressive neurological disorders / chronic injuries (MS, PD, MND, spinal cord injury) on occupational performance.	3.88	67.6%
Compare predicted versus actual outcomes of interventions.	3.85	64.7%
Analyse the provision and effectiveness of clinical supervision for occupational therapists	3.82	67.7%
Investigate the impact of social, cultural and economic environment on occupation.	3.82	64.7%
Identify the components of the unique domain of occupational therapy i.e. everyday occupations and health.	3.79	67.6%
Investigate the health consequences of the application of occupational science notions of occupational deprivation, alienation and imbalance.	3.79	58.8%
Develop care pathways from hospital to home for children with bracheostomy, epilepsy, tremor and other neurological conditions.	3.79	44.1%
Research the place of psychosocial interventions in the delivery of occupational therapy within Primary Care.	3.76	67.7%
Investigate the role and effectiveness of assistive technologies e.g. bariatrics, pressure relief and specialised seating.	3.76	64.7%
Research paediatric postural management for neonates.	3.76	58.8%
Research the impact and effectiveness of occupational therapy input on multidisciplinary mental health teams (acute and community).	3.74	61.8%
Investigate the links / boundaries / source of provision between the educational and health services for occupational therapy with school-going children e.g. in handwriting.	3.74	61.8%
Assess the impact of occupational deprivation in children from birth to age five.	3.74	58.8%
Examine the changing roles of managers and the need for specifically OT managers in e.g. mental health.	3.74	58.8%
Research best methods to produce multidisciplinary working.	3.71	64.7%
How can assessment processes be more functionally based?	3.71	64.7%
Demonstrate the effectiveness of group work such as in social skills training.	3.68	64.7%
Evaluate occupational therapy practice in neurology with regard to upper limb management.	3.68	64.7%
The role of occupational therapy in patients who have profound brain injury e.g. in early stages and in various stages of coma.	3.68	64.7%
Investigate the functional impact of specific diagnoses on individuals and groups.	3.68	61.8%
Studies that evaluate occupational therapy interventions in relation to risk education and safety enhancement.	3.68	55.9%
Explore the input of occupational therapy for people with intellectual disability e.g. assistive technology, occupational engagement.	3.68	55.9%
Assess the therapeutic benefits for patients of creative activities delivered through occupational therapy.	3.65	64.7%
Investigate the role of occupational therapy for clients with dual diagnoses including mental health and intellectual disability.	3.62	64.7%

RESEARCH PRIORITY	Mean	Consensus Level
The role of occupational therapy in family support (e.g. for patients with ABI and in paediatric and general palliative care).	3.62	64.7%
Investigate the role of occupational therapy in early intervention for psychosis.	3.62	58.9%
Identify predictors in pre-term infants for appropriate early interventions for potential ADD and ADHD.	3.62	58.9%
Investigate the efficacy of possible diagnosis-specific services within the HSE, e.g. ABI.	3.62	58.8%
Research the use of guidelines for environmental adaptation.	3.62	50.0%
Investigate the role of occupational therapy within multidisciplinary teams.	3.59	61.7%
Identify the role of occupational therapy in the management of paediatric chronic fatigue, pain, stress and anxiety related disorders.	3.59	61.7%
Investigate the attributes that lead individuals / teams to change behaviours in order to become users of evidence rather than readers.	3.59	58.8%
Studies that address both individual and group outcomes	3.59	50.0%
Evaluate the application of sensory processing and sensory profiling in mental health.	3.56	55.9%
Identify the role of occupational therapy in the detection and prevention of elder abuse.	3.56	55.8%
Compare cost-effectiveness of therapies in health promotion versus public education and other information media (internet, self-help and support groups).	3.56	53.0%
Research with community partners regarding health promotion and service development.	3.56	52.9%
Research into the role of OT in leading multidisciplinary teams in mental health areas	3.53	53.0%
Research how to develop interdisciplinary and / or transdisciplinary research partnerships.	3.53	50.0%
Identify the role of occupational therapy in paediatric oncology / haematology.	3.50	58.8%
Examine career development and choices for therapies and occupational therapy in Ireland e.g. impact of national basic grade OT, or diversification into other roles.	3.50	40.0%
Identify the input of occupational therapists as care co-ordinators in community mental health teams.	3.47	58.8%
Investigate the quality and potential benefits of the therapist-client relationship in relation to behavioural disorder and challenging behaviours.	3.47	50.0%
Investigate the public's and service users' perceptions of occupational therapy.	3.44	52.9%
Monitor change through action research in e.g. intellectual disability.	3.44	47.0%
Investigate the perceptions of other clinical disciplines, service providers and managers regarding occupational therapy input on multidisciplinary teams.	3.35	50.0%
Investigate ways in which research findings on health promoting behaviours can be disseminated into the public domain.	3.32	50.0%
Assess the usefulness of tools such as OCAIRS (Occupational Circumstances Assessment International Rating Scale).	3.32	37.0%
Analyse the potential value of occupational therapists engaging in co-operative shared care posts across the community / voluntary sectors.	3.29	44.2%

RESEARCH PRIORITY	Mean	Consensus Level
Investigate the role of lone-working occupational therapists in community mental health teams, including core assessments of newly referred clients.	3.29	44.1%
Comparison of different educational approaches in the therapies professions: problem based learning, directive learning, four year undergraduate or master's degree.	3.29	44.1%
Carry out small scale, local impact studies on a range of practice areas.	3.24	47.1%
Identify occupational performance components in both the normal population and in psychosis.	3.24	44.2%
Research multidisciplinary working in a paediatric clinic setting.	3.18	35.3%
Investigate the motivations behind non-pro-social occupations such as joy riding and arson.	3.09	26.5%
Investigate stress levels among occupational therapists and develop effective reduction strategies.	3.06	35.2%
Assess the therapeutic benefits for patients of alternative therapies e.g. music therapy or equine therapy.	3.00	38.2%
Examine issues around recruitment and retention of students and practitioners such as gender, personality traits.	2.94	23.6%
Identify occupational therapy role across settings *vis-à-vis* other disciplines in Ireland e.g. nursing.	2.79	20.6%
Investigate best methods for cascading skills to care workers e.g. travel, money management, social skills training.	2.76	14.7%
Investigate whether occupational therapy should be a stand-alone discipline, or work within multidisciplinary teams.	2.59	26.5%

Non-research statements

RESEARCH PRIORITY	Mean	Consensus Level
Initiate collaborative links between academic and clinical areas to facilitate the up-skilling in research of clinicians and clinical access for the academic researchers.	4.50	91.2%
Establish national and international research partnerships.	4.41	88.3%
Access training in grant writing to assist in getting established on the funding ladder.	4.26	85.3%
Align research studies with National Policy on mental health, stroke and cardiovascular conditions.	4.24	82.4%
Align research studies with National Policy on mental health, stroke and cardiovascular conditions.	4.24	82.4%
Research priorities should reflect the diversity of occupational therapy remit: therapies, equipment, return to work, adaptation, assessment, mobility, medico-legal work.	4.15	79.4%
Research priorities should reflect the diversity of occupational therapy remit: therapies, equipment, return to work, adaptation, assessment, mobility, medico-legal work.	4.15	79.4%
Investigate effective ways to apply new academic knowledge and evidence based skills into practice settings.	4.12	79.5%

Investigate the direction for occupational therapy within future Health Service developments in Ireland.	4.12	73.5%
Establish occupational therapy role in national guidelines for assessment as 'fit to drive' and 'fit for work' post ABI.	4.09	76.4%
Third level education should contain rigorous training in research methods.	4.03	70.6%

Appendix 6: Full Results Tables for Nutrition and Dietetics Panel

Ranked by Mean Indicating Level of Importance of each Priority

Items that gained consensus at Round 2 (ranked by mean)

RESEARCH PRIORITY	Mean	Consensus Level
Develop and evaluate evidence based targeted strategies, incorporating a variety of methodologies, for the prevention and treatment of obesity across the lifecycle with particular emphasis on childhood obesity.	4.40	86.7%
Develop outcome measures in relation to the impact of nutrition support / dietetic intervention.	4.23	80.0%
Evaluate the effectiveness of models and programmes to promote healthy eating in Primary schools, e.g. Health Promoting Schools, Much and Crunch, in terms of their self-sustaining qualities and positive outcomes.	4.13	83.4%
Provide a scientific, robust evidence base and guidelines for best practice that are disease-specific and related to clinical specialties.	4.13	70.0%
A comparative evaluation of existing programmes for improving dietary compliance in Type 2 diabetes e.g. Desmond, Xpert and Code.	4.10	76.7%
Develop and evaluate nutrition education programmes on infant feeding practices and weaning in different groups	4.10	76.7%
Audit of home enteral feeding services and the transition from hospital to community care.	4.10	76.7%
Identify methods of encouraging breastfeeding rates in Ireland: psychological, societal, marketing approaches, work-practice amendments.	4.07	76.7%
Vitamin D status and requirements across the lifecycle	4.07	73.3%
Evaluate effectiveness of Dietitian participation in early intervention / child development teams for the improvement of clinical outcomes for clients with disabilities.	4.03	83.3%
Explore the scope and extended role of the Dietitian in clinical care e.g. changing enteral tubes; passing Ng tubes; prescribing various foods, supplements and drugs.	4.03	73.4%
Research the most effective ways to support autonomous, self-managing patients with chronic diseases.	4.00	73.3%
Research the role of the Dietitian in the management of eating disorders across care sectors.	3.97	73.3%
Compare the effects of dietary therapy versus supplementation in nutritionally depleted patients.	3.93	73.3%
Evaluate student training in terms of current shortfalls and how to address them.	3.93	70.0%
Evaluate the range of training courses available in nutrition e.g. FETAC – in terms of competencies acquired and course regulation.	3.93	70.0%
Research the causes of non-breastfeeding, including attitudes, education and availability of facilities.	3.90	73.3%
Assess the cost-effectiveness of nutritional care in the Irish context.	3.90	70.0%
Evaluate the intake of Omega 3 in the Irish population, in relation to n6 and its effects (inflammation, reduction of Omega 3) and in light of the Omega 3	3.90	70.0%

RESEARCH PRIORITY	Mean	Consensus Level
content of local oily fish.		
Research the most effective health promotion strategies for all age groups in the prevention of chronic conditions such as diabetes, cardiovascular disease and obesity.	3.90	70.0%
Research to determine and evaluate effective ways to communicate health information and health promoting skills e.g. shopping trips, cooking courses, label reading sessions, the Arts, the Media.	3.87	76.7%
Compare effectiveness of structured group weight management programmes versus individual dietetic counselling for the treatment of adult overweight and obesity.	3.87	70.0%
Investigate new ways of educating and communicating a) with patients and b) with medical and healthcare professionals through e-learning / internet / web based resources.	3.87	70.0%
Develop learning models and assessment tools for undergraduate practice placement.	3.87	70.0%
Studies on nutrition among the pre-school population, including quality of nutrition in pre-school settings and means of improvement.	3.83	73.3%
Evaluate peer-led nutrition education programmes as facilitated by instructors trained by dietitians.	3.83	70.0%
Conduct a survey of food provision in post-primary schools to include questions pertaining to: income from vending machines; availability of fresh fruit; provision of hot meals; number of schools with healthy lunch policies.	3.83	70.0%
Develop models for effective dietetic counselling within Primary Care.	3.80	73.3%
Explore dietician-led strategies for children's weight management, from antenatal / infancy to teens, and compare outcomes 'within' versus 'away from' the medical setting.	3.73	70.0%
Evaluate structured group education practices in terms of outcomes in the Primary Care context.	3.73	70.0%

Items that gained consensus at Round 3 (ranked by mean)

RESEARCH PRIORITY	Mean	Consensus Level
Evaluate the efficacy of therapeutic diets.	4.03	76.7%
Research motivation and behaviour change with regard to nutritional and dietary health improvement e.g motivational interviewing.	3.97	80.0%
Evaluate effectiveness of a variety of educational / teaching methods and group-work strategies for dietary advice and develop evidence based models from outcomes.	3.93	73.3%
Develop a database of patients receiving nutritional support through enteral / parenteral feeding at home (e.g. the BANS data).	3.93	73.3%
Conduct a comprehensive study on the use of nutritional supplementation in Ireland (current use / appropriateness of use / toxicity).	3.90	73.3%
Conduct a comprehensive investigation of the levels of malnutrition in the Irish population, across various settings and age groups e.g. free-living, institutional living, care homes, hospitals, elderly, children, obese, underweight.	3.90	73.3%

RESEARCH PRIORITY	Mean	Consensus Level
Develop a strategic national approach to qualitatively investigate social motivation and public knowledge on various aspects of food, diet and health e.g. disempowered parents in the context of provision of food to children in schools.	3.90	70.0%
Longitudinal studies on the impact of nutrition and activity based interventions from pre-school, through later school settings.	3.90	70.0%
Evaluate the accuracy of current nutritional requirements.	3.87	70.0%
Measure the effectiveness of dietary advice with different patient groups.	3.83	80.0%
Research access to dietetic services in Primary Care / Community settings.	3.83	76.6%
Evaluate the role of probiotics in gastrointestinal disease – are they effective?	3.83	73.3%
Assess current nutritional knowledge of parents of young children in order to target key areas for education programmes.	3.83	70.0%
Investigate best method combinations to improve the nutritional status of young people to promote healthy choices, through schools, clubs, peers, teachers, parents, media – some, all or none of these.	3.80	76.7%
Research the incidence of dietary allergy in Irish children (peanut, eggs, milk, seafood, wheat, gluten, soya, greenuts) as well as causes, diagnosis and treatment.	3.77	70.0%
Conduct research to inform the development of structured education programmes and best practice for chronic diseases such as diabetes.	3.73	73.4%
Evaluate the role and value of dietetic input *vis-à-vis* other possible interventions such as medication (e.g. statins).	3.70	73.4%
Conduct a survey of the nutritional intake of children with physical and intellectual disabilities, including autism.	3.70	73.3%
Research health behaviours and devise dietary education resources for different populations including immigrants.	3.67	70.0%

Items that did not reach consensus (ranked by mean)

RESEARCH PRIORITY	Mean	Consensus Level
Assess the extent of nutritional knowledge among nurses and other care staff across a range of care settings: hospital; long term care; public health; GP practices.	3.90	66.7%
Research to build upon previous work and collaborate across teams, topics, disciplines and at national and international levels.	3.87	60.0%
Research the role of diet in the prevention of cancer, especially colon cancer and secondary cancers.	3.83	66.6%
Develop an increased focus on prevention rather than remedial nutrition interventions.	3.80	60.0%
Evaluate the effects and timing of feeding for the critically ill; late versus early; enteral versus parenteral; home feeding; medications; devices; tubes; presentation to A&E with tube problems.	3.80	56.7%
Research selection criteria used by GPs and other health professions when referring patients for nutritional counselling (community and acute settings).	3.77	63.4%

Develop the evidence base for best practice in the identification and management of coeliac disease across care settings.	3.73	66.6%
Research obesity management in the community: How can the 'Counterweight Programme' or similar be adapted for use by dietitians in Ireland?	3.73	63.3%
Devise strategies to tackle nutrition-linked health inequalities e.g. provisioning of nutrition sources for disadvantaged groups.	3.73	63.3%
Investigate the role of Dietitian involvement in the Primary Care setting in the early detection of renal disease and in improved clinical outcomes for chronic renal patients.	3.70	66.7%
Studies of pre-natal, pregnancy and post-natal nutrition.	3.70	63.3%
Develop specialised dietary educational resources for persons with learning disability.	3.70	63.3%
Develop food security screening tools for vulnerable sections of the community e.g. elderly, families in economic difficulty.	3.70	60.0%
Conduct an audit of service provision against identified needs and priorities.	3.70	56.7%
Research the causes of obesity at all levels, from molecular to societal (diet, activity, what determines patterns).	3.67	66.7%
Assess the contribution of fortified foods to the Irish diet.	3.67	63.4%
Research public knowledge and the effectiveness of educational campaigns related to the prevention and management of osteoporosis (diet, calcium sources, and other factors).	3.67	60.0%
Assess the effectiveness of nutritional interventions in various community settings.	3.63	66.7%
Assess the economic impact of obesity.	3.63	66.6%
Investigate the perceptions of parents with regard to children's weight status.	3.63	63.3%
Study the impact of obesity in the area of chronic disease e.g. inflammation.	3.63	63.3%
Research into early onset type 2 diabetes.	3.63	63.3%
Extend the cohesion and continuity of research between the basic science / laboratory setting, the clinical / therapy setting, and the public health setting.	3.63	60.0%
Research the rates of PEG infections and their causes.	3.63	60.0%
Research assessment procedures for nutritional status of patients with neurological injuries (spinal cord injuries and acquired brain injury).	3.63	56.6%
Develop nutritional screening tools that link length of stay with particular outcomes.	3.60	63.4%
Devise evidence based guidelines for the assessment of nutritional status and associated problems in children.	3.60	63.4%
Evaluate the role of antioxidants in inflammatory conditions.	3.60	60.0%
Research public attitudes and knowledge of folic acid supplementation and the extent to which women of childbearing age are supplementing or not.	3.60	60.0%
Research into nutrition and mental health.	3.60	60.0%
Research quality of life and self-esteem among serial dieting women.	3.57	63.4%
Determine current nutritional practices for pre-term and low birth weight infants.	3.57	60.0%
Research rates of selective eating and feeding problems in children with disability.	3.53	63.4%

Identify the competencies of newly qualified dietitians in nutrition counselling as assessed by clients.	3.53	63.4%
Research client choice regarding preferred service delivery: hospital, community or both?	3.53	53.3%
Evaluate the extent to which actual dietary intake of patients with chronic conditions (liver, kidney) meets with existing guidelines.	3.53	53.3%
Comparative study of effectiveness of multidisciplinary chronic disease management versus dietetic input alone.	3.53	46.7%
Evaluate the effectiveness of psycho-social and educational approaches for nutritional counselling e.g. compare clients' and therapists' expectations.	3.50	60.0%
Explore the incorporation of nutrigenomics into dietetic practice.	3.50	46.6%
Research the complications of parenteral nutrition and strategies to avoid them.	3.50	40.0%
Assess the effectiveness of specialised resources and interventions for men e.g. weight management groups, cardiac rehab.	3.47	60.0%
Determine best methods to capture quality of life from a diet perspective.	3.47	56.6%
Evaluate broad influences on public health e.g. economics, education, built environment, culture, and apply this knowledge in the design of public health programmes.	3.47	53.3%
Research the queried benefits of fibre feeds for patients with diarrhoea.	3.47	50.0%
Research nutritional management post-bariatric surgery.	3.47	43.4%
Conduct a qualitative evaluation of the 'Healthy Food Made Easy' course.	3.43	53.4%
Evaluate the effectiveness and cost-effectiveness of team-working in current clinical dietetic practice.	3.43	43.3%
Research into nutrition in the elderly.	3.40	56.6%
Conduct a pilot study of acute specialist Dietetic daily outreach clinics in the community.	3.40	43.3%
Research the incidence of metabolic syndrome as related to the distribution of body fat e.g. effects of trans fats and the occurrence of central abdominal fat.	3.40	43.3%
Investigate the fat intake of the population: trans / hydrogenated fats; fast foods; impact on heart health.	3.37	50.0%
Research the most effective interventions to improve the nutritional status of patients with dementia.	3.37	43.3%
Identify and address risk factors associated with obesity and metabolic syndrome.	3.33	60.0%
Carry out studies that address the role and prevalence of commercial weight management programmes and products such as Unislim.	3.33	50.0%
Conduct a quality of life survey for home TPN patients.	3.33	40.0%
Research the appropriateness and further development of existing and novel screening tools e.g. BMI in the elderly.	3.33	40.0%
Evaluate short and long term changes associated with cardiac rehab activities such as shopping tours, label reading, choices etc.	3.30	53.3%
Investigate the possible link between obesity and cancer.	3.30	46.7%
Comparison of obesity rates among children with disability versus peers.	3.30	40.0%
Research to facilitate the development, evaluation and sustainability of community food projects, including the construction of a food atlas.	3.30	36.6%

Research the optimal length of time to NJ (naso-jejunal) feeding in pancreatitis patients.	3.30	33.3%
Evaluate service user perspectives on location and quality of nutritional counselling in terms of impact on quality of life and health improvement.	3.27	40.0%
Research the role of the Dietitian in wound care management.	3.27	33.3%
Conduct a pilot study of health promotion / community dietetics delivery e.g. antenatal nutrition services to well, expectant women.	3.23	33.3%
Compare behaviour change in weight reducers versus diabetic patients, in terms of Dietetic approach.	3.20	26.7%
Research the energy, carbohydrate and protein requirements for adolescents engaged in sports.	3.17	33.3%
Investigate the intake of processed meat in Ireland and its relation to cancer risk (nitrates, nitrites, preservatives, salts).	3.13	46.7%
Research the effectiveness of dietary interventions for hyperlipidaemia / Type DM, including safe low levels of cholesterol in stroke patients.	3.13	33.4%
Investigate the effectiveness of glutamine in reducing mortality / ICU stay for ICU patients on TPN.	3.13	26.7%
Compare effectiveness of a Mediterranean diet versus low fat diet versus high protein diet for weight loss and long term weight management.	3.10	33.3%
Conduct a survey of sterol consumption and effectiveness of dosages taken.	3.10	30.0%
Investigate public knowledge with regard to the benefits of fibre and effective ways to improve fibre intake.	3.07	30.0%
Evaluate the benefits of Creon for gastrectomy patients.	3.03	20.0%
Conduct an investigation into the long term effects and outcomes of prolonged starvation / fasting.	2.97	20.0%
Research drug-nutrient interactions, e.g. grapefruit, cranberry juice.	2.93	26.7%
Assess the usefulness of transferring the Cardiac Rehab model onto the development of expertise in diabetes management.	2.93	23.3%
Gather outcome data for cholesterol information sessions to accompany existing satisfaction rates.	2.83	23.3%
Investigate the effects of withholding food and fluids during normal labour on new mothers' ability to cope in the first 48 hours post-delivery.	2.83	20.0%
Investigate the intake of food additives (colours, preservative etc.) and their impact on children's behaviour.	2.80	26.7%
Investigate the question as to whether or not organic food is more nutritious and health-supporting than conventional produce.	2.77	26.6%

Non-research items

RESEARCH PRIORITY	**Mean**	**Consensus Level**
Seek HSE backing for research development.	4.37	80.0%
Create dietetic research posts – raise the professional profile.	4.27	76.6%
Facilitate protected time for research.	4.27	76.6%
Seek adequate funding so that high quality research can be undertaken that achieves a high impact.	4.10	76.6%

Encourage research through training, funding, communication and network building, from getting started to the production of articles.	4.00	70.0%

Appendix 7: Full Results Tables for Speech and Language Therapy Panel

Ranked by Mean indicating Level of Importance of each Priority

Items that gained consensus at Round 2

RESEARCH PRIORITY	Mean	Consensus Level
Investigate ways to develop infrastructural support for research capacity building to facilitate small scale, service based research.	4.47	90.0%
Longitudinal outcome studies to investigate effects of therapy interventions for children and adolescents e.g. functioning / school progress / coping in later life.	4.43	90.0%
Determine best practice and outcome measures for severe phonological disorders and receptive / expressive language disorder.	4.40	93.3%
Provide evidence for best practice with specific client groups at specific developmental periods across the lifespan e.g. D.S. early intervention, ASD pre-school, voice and motor speech disorders etc.	4.40	90.0%
Develop robust (valid and reliable) outcome measures to evaluate efficacy / effectiveness of a range of therapy interventions for all age groups and conditions.	4.40	86.6%
Investigate optimal amounts and types of therapy for designated conditions to inform the establishment of priorities and effective service delivery models.	4.40	83.4%
Evaluate early intervention for clients with disabilities in terms of long term outcomes.	4.40	83.4%
Seek precise indicators as to inform the selection of therapy interventions for clients with specific conditions.	4.33	83.3%
Research on effects of indirect interventions e.g. training clients' parents, carers and teachers.	4.30	93.3%
Investigate the views of individuals with communication impairments in all aspects of the research process.	4.30	83.3%
Evaluate the therapy efficacy of various commercially available tools e.g. Talk Tools, Lámh.	4.27	83.3%
Devise effective and efficient models of service delivery for a variety of settings, client groups and populations e.g. schools, acute care, special needs, priority SES (Socio-economic Scale) groups, diverse cultural and linguistic groups, refugees.	4.23	80.0%
Investigate Speech and Language service provision in Ireland in terms of identified needs of service users and the extent to which they are met.	4.23	76.7%
Epidemiological research on the incidence and prevalence of communication and swallowing disorders in Ireland, across various age groups and living arrangements e.g. children in foster care.	4.20	83.3%
Conduct research that seeks the views of clients / carers with regard to experiences of living with communication and swallowing difficulties.	4.20	80.0%
Conduct research that seeks the views of clients / carers with regard to experiences of speech and language therapy and service delivery, from assessment and intervention through to discharge.	4.20	80.0%

RESEARCH PRIORITY	Mean	Consensus Level
Research effectiveness and 'best model' of occupational therapy interventions at second level education: 12+ years.	4.17	83.3%
Identify how children with Specific Language Impairment should be supported in order to reach their maximum potential in the secondary school system.	4.17	83.3%
Research the effectiveness of the language class (A dedicated, small mainstream class for children with Specific Language Impairment with a teacher and SLT working with 7 children).	4.17	83.3%
Research long term social and vocational outcomes for children with communication impairments.	4.17	80.0%
Develop effective pre-school and school age interventions for stuttering, with a focus on quality of life for client and parent, rather than impairment.	4.17	80.0%
Develop the use of I.T. for research including tracking systems for interventions, decisions and outcomes related to individual clients.	4.17	76.6%
Investigate outcomes for the 'language class' model of intervention for children with SLI.	4.10	86.7%
Compare the effectiveness of group versus individual therapy for a range of speech and language disorders across age ranges, from developmental to acquired.	4.10	83.4%
Research to establish optimal timeframes for therapy programmes and care pathways: duration, frequency, length of intervention.	4.10	83.3%
Evaluate the impact of therapy across impairment, activity and functioning.	4.07	76.7%
Investigate the impact of communication disorders on social, psychological and educational prognosis.	4.07	70.0%
Evaluate the effectiveness of clinical education and clinical supervision.	4.03	83.3%
Evaluate the provision of services for the elderly including nursing home input and best practice for ACC implementation.	4.03	80.0%
Identify best educational practice for occupational therapy students.	4.03	76.6%
Develop reliable, valid and culturally relevant assessment tools and procedures for the Irish population.	4.03	73.4%
Identify best practice in service provision for children and adults with dysfluency / stuttering problems in terms of outcomes of both approved and non-conventional methods.	4.00	80.0%
Discover how best to accommodate client views on service provision.	3.97	83.4%
Compare the effectiveness of different approaches to aphasia therapy.	3.97	80.0%
Investigate how best to deliver appropriate and effective services to a multi-cultural, multi-linguistic population, including refugee groups.	3.97	76.7%
Evaluate the impact of management practices around issues such as decision making, waiting lists, intervention packages and outcome measures.	3.97	76.6%
Establish efficacy and outcome measures for facial and oral tract motor therapy for speech and feeding.	3.97	73.3%
Research ways of reducing waiting times for SLT assessment and treatment without compromising quality of service.	3.97	70.0%
Conduct research that seeks the views of children themselves with regard to their experiences of therapy.	3.97	70.0%
Compare 'pull-out' versus collaborative models of service delivery for clients	3.93	76.7%

RESEARCH PRIORITY	Mean	Consensus Level
with intellectual disability.		
Research the efficacy of various models / language interventions for pre-school age children.	3.93	73.3%
Investigate the best model for providing team based multidisciplinary interventions to children with disabilities / developmental delay.	3.93	70.0%
Evaluate long term outcomes for clients with reference to type of impairment, type of intervention and educational experience.	3.93	70.0%
Research language difficulties in school age children 6+ : language skills and curriculum.	3.93	70.0%
Compare A.B.A. treatment versus 'eclectic approach' for autism.	3.93	70.0%
Evaluate best practice (SLT) for intellectual disability e.g. oral-motor therapy, teaching strategies, informal assessment tools, accessible information (nationally standardised symbols).	3.90	76.7%
Compare clinic-based versus school-based services in terms of best outcomes for children.	3.90	73.3%
Assess the evidence base in relation to the potential benefits / best practices of a collaborative, integrated team approach.	3.90	70.0%
Compare language / social skills outcomes of children with intellectual disability in mainstream versus special education settings in the Irish education system.	3.90	70.0%
Evaluate the provision of therapy to children with persisting general language or pragmatic language difficulties.	3.90	70.0%
Investigate the incidence / prevalence of bi- and multi-lingualism in Ireland and address the associated challenges for occupational therapy service delivery.	3.87	73.3%
Carry out a cost – benefit analysis of interventions and modes of service delivery in occupational therapy.	3.87	70.0%
Develop guidelines for the prevention / health promotion role of occupational therapy services.	3.87	70.0%
Research how best to support children with hearing loss.	3.83	83.4%
Develop assessments and intervention techniques for bi- and multi- lingual children, especially Eastern European.	3.83	76.6%
Develop standardised developmental tests and assessment tools for Irish language speakers.	3.83	70.0%
Identify best practice in multidisciplinary / interdisciplinary education for speech and language therapy students.	3.83	70.0%
Examine the use of clinical reasoning and critical thinking: why and how clinicians do what they do.	3.83	70.0%
Research to identify linguistic norms and problem areas within the native Irish speaking population.	3.77	73.3%

Items that gained consensus at Round 3 (ranked by mean)

RESEARCH PRIORITY	Mean	Consensus Level
Develop qualitative and quantitative outcome measures across client groups	4.20	83.3%
Compare clinic versus in-school provision for children's speech and language	4.07	73.3%

RESEARCH PRIORITY	Mean	Consensus Level
services.		
Compare primary care services versus specialist teams in terms of best outcomes for children with disabilities at pre-school level.	4.03	80.0%
Develop theoretical frameworks to explain and inform the impact of therapy e.g. phonological theory related to phonological disorder.	4.03	73.4%
Evaluate early intervention for clients with disabilities in terms of cost-effectiveness for different models used.	4.00	76.6%
Implement a longitudinal study on specific language impairment (SLI) to identify risk markers and outcomes as children move to adulthood.	4.00	70.0%
investigate the provision of specialist posts in speech and language therapy	3.97	83.3%
Comparative research on roles of therapy agents: teacher / parent / SLT assistant / individual therapy with occupational therapist.	3.97	73.3%
Investigate the incidence of, and provision for, dysphagia (swallowing difficulties) in the population in terms of specific groups e.g. intellectual disability, post-stroke, children.	3.93	83.3%
Develop assessment procedures and outcome measures for various SLT treatments in dysphagia (functional and psychological).	3.90	83.3%
Undertake interdisciplinary research to explore health professionals' use of assessment tools and diagnostic frameworks for children with complex needs.	3.90	76.6%
Establish factors that contribute to the quality of therapist / therapeutic relationship e.g. from clients' perspectives.	3.90	70.0%
Research the effectiveness of various SLT interventions for dysphagia such as cervical auscultation and DPNS.	3.87	73.3%
Investigate the issue of non-qualified people engaged in advertising and running speech therapy practices and courses in the private sector.	3.83	73.4%
Test the effectiveness of the model that advocates universal screening of all children for speech and language difficulty.	3.83	73.3%
Investigate the role of occupational therapists consulting in pre-school and mainstream schools (including any 'gaps' in provision).	3.83	70.0%
Research effectiveness of, and how best to deliver, social skills interventions for children with speech and language difficulties.	3.80	70.0%
Compare outcomes from multidisciplinary versus unidisciplinary intervention.	3.77	70.0%
Develop effective links between needs assessment and intervention delivery for children with disabilities / developmental delay.	3.77	70.0%
Identify factors that can assist in deciding prognosis.	3.77	70.0%
Basic Pathology / Science Research – investigate the nature of disorders e.g. through neuroscience / brain imaging / genetics research.	3.77	70.0%
Research the prevalence and efficacy of diagnostic labels in the context of co-morbidity e.g. SLI with ADHD; SLI and DCD.	3.77	70.0%
Research on the availability of occupational therapy for various age groups with communication difficulties, as distributed across the country.	3.77	70.0%

Items that did not gain consensus (ranked by mean)

RESEARCH PRIORITY	Mean	Consensus Level

RESEARCH PRIORITY	Mean	Consensus Level
Research cultural expectations of occupational therapy by foreign nationals.	3.77	66.6%
Investigate the working of multidisciplinary / interdisciplinary teams for all disorders and across a range of settings: community, acute, sub-acute; early intervention.	3.73	63.3%
Conduct large scale, rigorous RCTs to compare various treatments.	3.70	66.7%
Investigate waiting list discrepancies in different parts of the country.	3.70	63.4%
Research ways of reducing high 'failure to attend' rates for occupational therapy Services.	3.70	63.3%
Investigate the effectiveness of Total Communication Approach in the classroom.	3.70	63.3%
Development of agreed models / guidelines for the recording and management of service data such as waiting lists, programme duration and therapy outcomes.	3.67	66.7%
Examine the current state of research in relation to impairment therapy in aphasia.	3.67	66.6%
Research attitudes and beliefs of therapists with regard to multi-cultural populations and contexts, and in relation to the application of the ICF model.	3.67	60.0%
Investigate reasons for the lack of ICT – web technology use to enhance speech and language therapy practice and develop its use for clients in outlying areas.	3.63	66.6%
Compare the effectiveness of different approaches to the management of hyper- / hypo-nasality.	3.63	60.0%
Address the gap in relation to effectiveness of speech and language therapy for comprehension and production difficulties especially beyond pre school.	3.63	56.6%
Comparative research in language and auditory processing: in normal language acquisition; in second language acquisition; in children with language difficulty; in aphasia; in dyslexia; in schizophrenia.	3.60	60.0%
Identify optimum levels for factors related to workforce planning e.g. caseload size; staff grades and skill mixes; levels of care from primary through to tertiary.	3.53	60.0%
Investigate the effectiveness of the SPARCC type approach in early and mid-stage dementia.	3.53	60.0%
Research in normal development of communicative, cognitive and literacy / vocabulary skills.	3.53	46.6%
Analyse or outline the components of an undergraduate SLT programme in terms of course standards, CE, CPD, academic and clinical viewpoints.	3.50	53.3%
Investigate the efficacy of ACC in vent or trachi patients.	3.47	60.0%
Relate interactionist – constructivist theories of language development to the development of assessments and interventions for children with speech, communication difficulties.	3.47	40.0%
Research on the representation of communication difficulties in the media.	3.20	33.3%
Compare 'MACS' with traditional practices in the management of waiting lists.	3.20	30.0%
Analyse clinical discourse: how therapy is implemented through talk, 'small talk, 'conversation partners'.	3.20	30.0%
Investigate the role of SLT in severe cerebral palsy.	3.20	26.7%

RESEARCH PRIORITY	Mean	Consensus Level
Evaluate therapies and tools used in clinical practice in light of the question: 'Are speech and language therapists technicians or professionals?'	3.17	26.6%
Research to investigate the issue of return to work for people with additional needs.	3.13	30.0%
Investigate the role of SLT in post-traumatic amnesia (PTA).	3.10	30.0%
Address the perceived lack of postgraduate training for speech and language therapy.	3.07	33.3%
Examine the impact of pavee and gender on clinical discourse.	3.07	23.0%
Investigate the 'teaching versus testing' dilemma in SLT.	3.07	20.0%
Examine the process of transitioning to work.	3.00	30.0%
Research ways of reducing inappropriate referrals for Speech and language therapy services.	2.97	26.6%
Implement a study to investigate the question: 'Do premature babies have a decline in feeding at 37 weeks (growth spurt)?'	2.77	10.0%
Examine the issue of mature students e.g. the number 'allowed' to train in Ireland.	2.70	20.0%

Appendix 8: Full Results Tables for Podiatry Panel

Ranked by mean indicating Level of Importance of each Priority

Items that gained consensus at Round 2 (ranked by mean)

RESEARCH PRIORITY	Mean	Consensus Level
Research the effectiveness of podiatry in reducing below knee amputations (including foot / toe) in both types 1 and 2 diabetes.	4.46	100%
Evaluate national practice standards for podiatry in Ireland.	4.46	92.3%
Identify the role of podiatry for improving quality of life and for maintenance of mobility and independence in the elderly	4.46	92.3%
Evaluate and enhance public knowledge and awareness of the contribution and availability of podiatry services as part of the Public Health / Primary Care system.	4.46	92.3%
Determine the rate of limb amputation in Ireland, including regional variations and in relation to the availability of specialist multidisciplinary input.	4.38	84.6%
Research into how the wider health professions are educated about the podistry profession.	4.38	84.6%
Research public accessibility to podiatry services in Ireland, with special reference to podiatry for patients with diabetes.	4.31	92.3%
Evaluate the cost-effectiveness of podiatry services in terms of quantified measurement of benefits for Public Health.	4.31	84.7%
Research the most effective strategies for the multidisciplinary management of diabetes.	4.31	84.7%
Identify variations in podiatry service provision across regions and sectors, including levels of professional awareness of services available.	4.23	92.4%
Conduct a needs assessment for podiatry services in Ireland, with special reference to high need groups: Diabetes; Mental Health; Podopaediatric; Intellectual Disability; Renal.	4.23	84.7%
Investigate the efficacy of treatments available for verruca.	4.23	77.0%
Epidemiological research on Diabetic Foot: amputation; ulceration; A&E; hospital admission	4.15	93.3%
Research accessibility of specialist services, (such as vascular, orthotist), for high risk patients in receipt of Private podiatry services.	4.15	92.3%
Research on rheumatology and the role of the podiatrist in the management of the rheumatoid foot.	4.15	84.7%
Research and develop patient education and Health Promotion.	4.15	84.6%
Investigate the impact of podiatry on the prevention of falls in the elderly.	4.15	77.0%
Develop podiatric foot screening systems for the detection of risk among the Irish population e.g. a universal annual foot review to reduce amputation rates.	4.15	77.0%
Explore perceptions and attitudes of GPs and other allied health professionals towards podiatry services and roles, in terms of impact on patient referral rates.	4.08	77.0%
Research to determine the clinical effectiveness of podiatric biomechanical assessment and the prescription of manufactured insole therapy (Orthoses).	4.08	77.0%

RESEARCH PRIORITY	Mean	Consensus Level
Research biomechanics as related to podiatry.	4.08	77.0%
Assess the effects on service cohesion versus fragmentation, of running the HSE podiatry service on a sessional / contract worker basis.	4.00	84.6%
Research foot problems in children with Downs Syndrome (0-50) and (5-15).	4.00	84.6%
Research systems and diagnostic markers for the early detection of Charcot Foot / Charcot's osteoarthropathy.	4.00	76.9%
Investigate the question "Does accreditation of podiatry practices improve the quality of care to public patients?"	3.92	84.6%
Examine the level of Health Board support available to practising podiatrists.	3.92	77.0%
Conduct a review to ascertain the availability of surgical footwear to patients in the Public Health System.	3.92	77.0%
Research and enhance communication between Primary Care health professionals in relation to patient referrals.	3.92	77.0%
Identify the role of podiatry in podopaediatrics and special needs.	3.85	76.9%
Evaluate the need for audits for Private Practice podiatry and how to carry these out.	3.77	76.9%

Items that gained consensus at Round 3 (ranked by mean)

RESEARCH PRIORITY	Mean	Consensus Level
Test the efficacy of podiatric nail surgery versus nail surgery performed by orthopaedic surgeons / general practitioners.	4.46	92.3%
Investigate the benefits of advanced prescribing by podiatrists in terms of impact on service delivery to patients.	4.17	83.3%
Epidemiological research on Diabetic Foot: amputation; ulceration; A&E; hospital admission etc.	4.15	92.3%
Conduct a survey of antibiotic usage patterns for the treatment of diabetic foot ulcer in Ireland.	4.00	84.6%
Research diabetic education tools for use in Ireland e.g. Xpert.	4.00	83.4%
Investigate prescribing protocols for podiatry.	4.00	77.0%
Research on diabetic foot including quality of life studies.	3.92	84.6%
Research methods for the reduction of cross-infection in the clinical environment.	3.85	76.9%

Items that did not gain consensus (ranked by mean)

RESEARCH PRIORITY	Mean	Consensus Level
Explore the role of podiatry within multidisciplinary teams.	3.92	69.3%
Research onycomycosis and develop effective protocols to clear nail.	3.83	66.7%
Explore relationships between medical staff and allied health professionals.	3.77	69.3%
Explore the area of education on footcare for those with mental health problems and diabetes.	3.77	69.2%

RESEARCH PRIORITY	Mean	Consensus Level
Develop a joint physiotherapy / podiatry approach to musculo-skeletal problems.	3.77	66.9%
Research Health and Safety at work.	3.77	61.6%
Investigate podiatrists' understanding of the mechanisms of action of functional foot orthoses.	3.69	53.9%
Research wound healing and ulcer care.	3.62	69.3%
Research pharmacology as related to podiatry.	3.62	69.2%
Survey the extent and types of functional foot orthoses prescriptions.	3.62	61.6%
Conduct a survey to compare prioritisation of referrals between self-referred patients versus those referred by GP or other Health Professionals.	3.62	61.6%
Investigate common foot disorders including FHID.	3.58	58.4%
Survey the scope and types of musculo-skeletal services delivered.	3.54	38.5%
Examine podiatric services as required by, and delivered to, paediatric gait analysis.	3.46	30.8%
Investigate the value of podiatric involvement in triaging orthopaedic referrals.	3.46	30.8%
Investigate the attitudes of patients regarding podiatry versus Chiropody terms.	3.38	69.2%
Research the impact of podiatry services for patients with a psychiatric history.	3.38	23.1%
Investigate Tinea Pedis.	3.31	53.9%
Research the effectiveness of orthotics in terms of foot type and pathology breakdown and the quality of materials used by manufacturers.	3.31	38.5%
Research the role of podiatry in palliative care.	3.31	38.5%
Investigate inter-professional learning at undergraduate level in the therapies and whether this has a positive effect on IP working post-qualification.	3.31	38.5%
Research the effectiveness of anti-microbial curtain drapes in combating MRSA in the clinical setting.	3.00	15.4%
Compare Ritualistic practice versus Evidence based Practice.	2.92	30.8%

Appendix 9: Full Results Tables for Orthoptics Panel

Ranked by Mean indicating Level of Importance of each Priority

Items that gained consensus at Round 2 (ranked by mean)

RESEARCH PRIORITY	Mean	Consensus Level
Review of referral criteria and education of referral sources.	4.57	100%
Investigation of areas without an orthoptic service, including effects on patient outcomes and patient satisfaction.	4.42	100%
Research into long term effects of poor vision on education and employment.	4.28	85.8%
Investigation of effectiveness of vision screening.	4.28	85.8%
Research into source, type and quality of information provided on referrals to orthoptic services.	4.28	100%
Research into manpower requirements with regard to orthoptic service provision.	4.14	100%
Research into the relevance of referrals due to family history of squints.	4.14	71.5%
Quantitative and Qualitative Research into outcomes of occlusion therapy.	4.14	71.4%
Research into the accuracy of referrals to orthoptic service from the National School Entry Vision Screening Programme.	4.14	100%
Investigate Cost effectiveness of orthoptic treatment.	4.00	100%
Research into Continuing Professional Development, including CPD delivery/access for rural/stand alone orthoptist's.	4.00	85.7%
Investigate the question: Are there clinical specialists in various fields?	4.00	85.7%
Examine existing supports & barriers to professional development.	4.00	85.7%
Explore the long term outcomes of amblyopia treatment.	4.00	85.7%
Research The orthoptic involvement in Specific learning difficulties, dyslexia etc.	4.00	85.7%
Comparative research into orthoptic practices in Ireland vis-á-vis other countries.	3.85	85.7%
Research visual development in normal and special needs children.	3.85	85.7%
Research the question: Are there enough professionals undertaking higher education qualification?	3.85	71.4%
Explore Multi-disciplinary approach in patient care.	3.85	71.4%
Explore the question: Are they accessible as resources?	3.85	71.4%
Research the question: Are specialist services locations identified for special needs referrals?	3.85	71.4%
Examine reasons for failure to attend appointments.	3.85	71.5%
Build on recent innovations and developments in research capacity for orthoptics as a discipline.	3.71	71.4%
Explore innovation in CPD opportunities: Research into how cross profession CPD & Research can be facilitated.	3.71	71.4%
Effective Amblyopia treatment.	3.71	71.5%

RESEARCH PRIORITY	Mean	Consensus Level
Efficiency of amblyopia treatment.	3.71	71.5%
Research the question: Is there clinical pathology going undetected due to an absence of screening?	3.71	71.4%
Examination of attendance at departments, (often around 20% of clinics).	3.71	71.4%

Items that gained consensus at Round 3 (ranked by mean)

RESEARCH PRIORITY	Mean	Consensus Level
Examine Referral routes of new patients.	4.00	85.7%
Clinical Research to examine the effect of refractive correction on strabismus.	4.00	85.7%
Research into stroke assessment.	4.00	85.7%
Research opthalmic aspects of learning difficulties, dyslexia etc.	3.85	71.4%
Treatment of intermittent exotropia.	3.85	71.4%
Non-surgical treatment of intermittent exotropias-does it work.	3.85	71.4%
Research to determine if variation in prescribing practice influences angle of strabismus and indication and timing of surgical intervention.	3.85	71.4%
Atropine versus occlusion in Amblyopia.	3.57	71.4%

Items that did not gain consensus (ranked by mean)

RESEARCH PRIORITY	Mean	Consensus Level
Orthoptic exercises in the treatment of strabismus.	3.71	57.2%
Research orthoptist's role in screening.	3.57	57.1%
Explore examples and practices in research going on in other countries where there are more orthoptists.	3.42	57.1%
Reasons for failing to comply with treatment of occlusion of glasses.	3.28	28.6%
Research Clinical area's inclusive of Refraction, Diabetic Screening, Glaucoma, Refractive Surgery, etc	3.28	28.6%
Changes in the incidence of squint and consequent adjustments in practice, eg, numbers requiring surgery.	3.28	14.3%
Examine differences between private, fee-paying schools vision screening and Government run, non-fee paying National Schools who receive HSE provided vision screening services.	3.14	28.6%
Glaucoma treatment / management.	3.14	28.6%
Follow up on audits of the glasses patients arrive into Departments wearing versus the prescription originally requested.	3.14	28.6%
Research the effects of Networks: why they work, why they don't, what ones are needed, what ones exist.	3.14	14.3%
Research the question: Are families aware of lack of screening?	3.00	28.6%
Research the question: Are children being screened by other sources?	3.00	28.6%

RESEARCH PRIORITY	Mean	Consensus Level
Examine issues around the numbers of orthoptic PhDs	2.85	28.6%

Appendix 10: Full Results Tables for Key Stakeholders Panel

Ranked by Mean indicating Level of Importance of each Priority

Items that gained consensus at Round 2

RESEARCH PRIORITY	Mean	Consensus Level
Evaluate the cost effectiveness of therapy interventions.	4.45	90.9%
Research into quality assurance and quality improvement in the Therapies.	4.45	86.4%
Research the effectiveness of integrated care pathways across Acute and Primary Care services.	4.41	90.9%
An economic analysis and systematic review of early intervention and early identification strategies.	4.41	90.9%
Research into the development of effective team working: intra-, inter- and trans-disciplinary and evaluate impact.	4.41	86.3%
Identify best team models for the delivery of a patient-centred service through examination and production of evidence.	4.41	86.3%
Evaluate service delivery models from the perspective of service users.	4.41	86.3%
Identify the role of the therapies in the management and delivery of the new Primary Care Model.	4.36	86.4%
Evaluate the impact of service availability by region.	4.36	86.4%
Research Quality of Life as a therapy outcome in chronic disease management: Stroke; arthritis; musculo-skeletal; pain; neurological; respiratory.	4.36	86.3%
Research into the development of primary care services and primary care teams.	4.32	91.0%
Devise mechanisms to ensure that practitioners adhere to best practice models.	4.32	86.4%
Explore how best to integrate services across acute and community sectors.	4.27	90.9%
Develop Therapy led service delivery on continuum of care for young patients requiring Stroke Rehabilitation.	4.27	86.4%
Develop research partnerships between clinical and academic centres.	4.27	81.9%
Develop the evidence base on the efficacy and effectiveness of therapy interventions to deliver best health care.	4.27	81.8%
Research how best to develop adequate clinical audit systems.	4.27	81.8%
Assess the effectiveness of current practices across all care contexts from the perspective of service users.	4.27	77.3%
Build knowledge and skills capacities in research methodology among the therapy professions to equip them to both carry out and critique research.	4.27	72.7%
Assess the short and long term financial implications of providing co-ordinated, patient-centred care to older people with multiple health conditions.	4.23	86.4%
Research the prevention and management of chronic illness.	4.23	86.4%
Research effectiveness of early intervention models across age groups.	4.23	81.9%
Research the role of the therapies across the acute and PCCC sectors in promoting a seamless service.	4.23	81.9%

RESEARCH PRIORITY	Mean	Consensus Level
Analyse the current level of integration within the HSE (hospital / community) and identify possible barriers to the integration of services.	4.23	81.9%
Research the extent to which therapy interventions are effective in achieving outcomes which are meaningful to patients.	4.18	86.4%
Developing and delivering more Integrated care through the introduction of an integrated health and social care model	4.18	81.9%
Research to ensure that interventions are goal oriented and outcome focused.	4.18	77.3%
Research into the standardisation and validation of assessments.	4.18	72.7%
Research related to obesity e.g. identify targets for pre-school preventive education	4.14	86.3%
Research into the provision of multiple preventive services as part of evidence based Primary Care.	4.14	77.3%
Research into cost effective use of personnel and skill mixes.	4.14	72.8%
Research service user views with regard to needs for therapy services and how best to provide for them e.g. team approach; effective interventions; desired outcomes	4.14	72.8%
Research into the adoption of an evidence based approach to determine best practice in health care.	4.14	72.8%
Develop hospital to home health care access to improve outcomes for discharged patients with multiple health conditions.	4.14	72.7%
Intra-therapy professions' impact on chronic illness management: diabetes; cardiology; orthopaedics.	4.09	81.8%
Research the role of therapy professions in the acute sector with reference to the delivery of discharge planning priorities.	4.05	90.9%
Explore the effectiveness of multi-disciplinary working in specific areas: Disability; mental health; care of the elderly.	4.05	86.4%
Research into the development of a multidisciplinary approach to childhood obesity in Ireland.	4.05	77.3%
Compare home visiting versus centre-based treatment	4.05	77.3%
Identify how best to evaluate /measure Quality of Life as an outcome of therapy intervention	4.05	77.3%
Determine economic outcomes in effectiveness studies of therapy services.	4.05	77.3%
Research how best to ensure patient-centeredness in the planning and delivery of therapy services.	4.05	77.3%
Evaluate the effectiveness of current management structures in the therapy professions in the meeting of service delivery requirements.	4.05	77.3%
Research the role of the therapies in Health Promotion in terms of benefits to the health and well-being of the Irish population.	4.05	72.7%
Determine the extent to which the availability of therapy services affects the use of other medical care resources.	4.00	81.8%
Develop a model of integrated education with speech and language therapy for school aged children.	4.00	81.8%
Research the integration of patient records	4.00	77.3%
Research to enhance Patient Centerness	4.00	77.3%

RESEARCH PRIORITY	Mean	Consensus Level
Research the scope and effectiveness of extended roles for therapy professions: A&E; falls prevention; accessible care; pain management; professional readiness.	4.00	77.3%
Identify enablers and obstacles to multidisciplinary team working.	4.00	72.7%
Advance the degree of integration among therapy professions and in relation to nursing, including integrated care planning.	3.95	81.8%
Research the impact of therapies on Quality of Life for the older person e.g. keeping active.	3.95	81.8%
Research developmental milestones with regard to the developmental environments of young children in Ireland today.	3.95	81.8%
Analysis of the numbers and locations of therapy professionals working in the Irish health services, including mental health services.	3.95	77.3%
Research to enhance Cancer Treatments and Services.	3.95	77.2%
Research cost containment and value for money through the development of effectiveness and efficiency.	3.95	72.8%
Competence Assurance and Competence Assessment for therapy professions.	3.95	72.7%
Conduct research to ascertain if high level teamwork improves quality of life outcomes in clinical service delivery.	3.91	77.3%
Compare team based assessments versus unidisciplinary assessment.	3.86	72.8%
Research into best practice for Diabetes.	3.86	72.7%
Longitudinal study into long term educational and vocational placement of children presenting with early speech and language deficits.	3.86	72.7%
Research the prevalence and consequences of malnutrition, especially micro-nutrient deficiency, in hospitalised patients and in other acute care settings.	3.86	72.7%
Undertake research to underpin models for decision making and planning in the Therapies.	3.77	77.2%

Items that gained Consensus at Round 3 (ranked by mean)

RESEARCH PRIORITY	Mean	Consensus Level
Assess the impact of 'the doubling in Health Care Professions' (numbers) from 2000 – 2007.	4.18	81.8%
Analysis of the impact of skill mix on the effectiveness of team-working.	4.09	81.8%
Development of a workforce planning system for Allied Health Professions.	4.05	86.3%
Research factors associated with the maintenance of 'well elderly' in the community.	4.05	86.3%
Determine the actions and resources required to enable therapy professionals to work in the most effective and efficient ways.	4.00	77.3%
Research the best model for clinical directorates to achieve improved service delivery for therapy professions.	4.00	77.2%
Research children's understandings and experiences of therapy services including interventional impact studies on children's lives.	4.00	71.8%
Explore the role of therapy professions in the future restructuring of the Irish Health Services along the lines of Integrated working.	3.95	72.7%
Research alternative and innovative therapies for the treatment of Autism.	3.91	81.8%

RESEARCH PRIORITY	Mean	Consensus Level
Evaluate from a regional and national perspective the use and availability of intensive rehabilitation services, including hydrotherapy and its impact on Quality of Life.	3.91	77.2%
Research Health Inequalities.	3.91	72.7%
The development and efficacy of technology e.g. Assisted Living; Aids and Appliances.	3.86	72.7%
Research the working dynamics between the professions and the multidisciplinary / Primary HealthCare Team, including role definition and organisational system.	3.86	72.7%
Develop co-ordination and collaboration between all disciplines and professions.	3.82	77.2%
Investigate how current workforce planning systems have impacted on the delivery of therapy services by professionals in terms of supply and demand dynamics.	3.82	72.7%
Research service user views with regard to needs for therapy services and how best to provide for them e.g. team approach; effective interventions; desired outcomes.	3.77	72.7%
Use an action research approach to develop and evaluate a good practice model of multi-disciplinary management of dysphagia in long term care settings.	3.68	77.2%
Identify an appropriate best practice framework for therapy professions management systems.	3.68	72.7%

Items that did not reach consensus (ranked by mean)

RESEARCH PRIORITY	Mean	Consensus Level
Research models for best practice in different settings (hospital, community), e.g. medical model, social model, expert, transplant, consumer.	3.82	68.2%
Determine functional outcomes in relation to different therapy approaches and protocols e.g. post-surgical procedures for musculo-skeletal disease and injury.	3.77	68.2%
Devise therapy assessment and treatment strategies to address high risk health behaviours such as lack of physical activity; unhealthy diet; tobacco use.	3.73	68.2%
Assess the effectiveness of current practices across all care contexts from the perspective of service providers.	3.64	68.2%
Determine the role of therapy professionals within the 'Clinicians In Management' initiative.	3.64	68.2%
Research the construction and operation of Community Mental Health Teams: generic versus defined professional; benefits and outcomes of each.	3.77	68.1%
Investigate the extent to which both dietitian led clinics and Dietitian prescribing represent value for money.	3.73	68.1%
Research the issue of problems with recruitment and retention of therapists within the learning disability sectors in Ireland.	3.68	68.1%
Research into Continuous Professional Development.	3.64	63.7%
Compare the clinical effectiveness of therapy services *vis-à-vis* nursing roles which have moved into therapy areas.	3.82	63.6%

RESEARCH PRIORITY	Mean	Consensus Level
Research related to bone health in children.	3.82	63.6%
Identify and carry out research on workforce capacity issues in the therapy professions.	3.73	63.6%
Evaluate service delivery models from the perspective of service providers.	3.55	63.6%
Compare Generic versus Specialist competencies within teams in terms of clinical and service outcomes.	3.77	59.1%
Assess the impact of therapy on Quality of Life for patients accessing services in the community sector.	3.68	59.1%
Evaluate the incidence of malnutrition in Ireland.	3.68	59.1%
Research the role of leisure in rehabilitation programmes in terms of outcomes.	3.64	59.1%
Evaluate the role of the Dietitian on Community Mental Health Teams.	3.50	59.1%
Research the effects of education and training to GPs on ONS usage, in termsof wastage versus appropriate prescribing.	3.50	54.6%
Evaluate the teaching / tutoring competencies of therapists involved in undergraduate education	3.68	54.5%
Research into the clinical teaching and learning environments of therapy professions e.g a learner centred approach to undergraduate education in HEIs	3.55	54.5%
Conduct research by both individuals and teams in relevant specialties such as cardiology and oncology	3.59	50.0%
Research the role of the A. H. P. manager in Hospital Executive Management Teams	3.55	50.0%
Research to determine appropriate career structures for the therapy professions.	3.50	50.0%
Conduct a needs analysis in light of the changing structure of the Irish population	3.45	50.0%
Explore the perceptions and attitudes of new graduates towards their undergraduate curriculum and training	3.32	50.0%
Determine the prevalence of the main speech and language problems in the population	3.50	45.5%
Compare effectiveness of the block therapy approach across a range of client groups	3.55	45.4%
Ascertain the perspectives and views of all stakeholders on therapy services.	3.50	45.4%
Research mental health intervention as part of therapy services.	3.45	45.4%
Research the role of occupation in dementia care units in terms of outcomes.	3.45	40.9%
Evaluate the impact of medical advances in relation to the management of arthritic conditions, with reference to the current expectations from therapy professions.	3.41	40.9%
Research occupational performance deficits of people in forensic settings and long stay wards.	3.41	40.9%
Research how best to achieve citizen compliance with public health advice.	3.41	40.0%
Explore the role of occupation and therapeutic activities in acute inpatient facilities.	3.32	36.4%
Research into the retention of occupational therapists working in mental health.	3.32	36.4%

RESEARCH PRIORITY	Mean	Consensus Level
Research the effectiveness of early enteral feeding in renal replacement therapy patients.	3.32	36.4%
podiatric topics e.g. foot biomechanics; verucca treatments.	3.27	31.8%
Research public views on the role of therapy professions.	3.23	31.8%
Research the impact of a model of family in-service provision at different levels, including predictions.	3.18	27.3%
Research problem based learning within therapy undergraduate education related to bone health in children.	3.09	27.3%
Research therapies interventions: C.U.A. / C.B.A.	3.14	22.7%
Evaluate the place and train model for vocational rehabilitation.	3.23	18.1%

Appendix 11: Full Results Tables for Service Users Panel

Ranked by mean indicating Level of Importance of each Priority

Items that gained consensus at Round 2 (ranked by mean)

RESEARCH PRIORITY	Mean	Consensus Level
Support families in the development of coping and parenting skills	4.75	100.0%
Cancer research with regard to the therapy professions	4.62	100.0%
Explore the meanings and identify factors associated with recovery	4.57	75.0%
Explore the barriers to accessing services with regard to developmental co-ordination disorder	4.50	100.0%
Competence of professionals in working and communicating with patients.	4.50	87.5%
Developmental co-ordination disorder: causes	4.50	87.5%
Research into dementia with regard to the therapy professions	4.50	75.0%
Research the effectiveness of a range of interventions to improve care for people with diabetes	4.42	87.5%
Research into communication and co-ordination among therapy professions with regard to developmental co-ordination disorder.	4.37	100.0%
Fund longitudinal, comparative, matched-group studies of alternatives to drug treatment.	4.37	87.5%
Speech and Language disorders especially with regard to the needs of children.	4.25	100.0%
Research the role of mutual help in the management of all chronic illnesses.	4.25	87.5%
Explore therapy brought to the home as an alternative to clinics for families in need	4.25	75.0%
Undertake research that leads to the development of models for integrated working across acute, residential and community settings.	4.25	75.0%
Explore the validity of the medical model, including possible connections between pharmaceuticals, universities, scientific journals and professional bodies.	4.25	75.0%
Carry out research that improves patient care.	4.12	87.5%
Research into ADHD with regard to the therapies professions	4.12	75.0%
Research into asthma at a genetic level to identify the possibility of specific genes that may cause asthma	4.12	75.0%
Research the effects of inhaled corticosteroids in children to obtain more specific dosage regimes for children as opposed to adults	4.12	75.0%
Research into allergic triggers for asthmatics	4.00	87.5%
Occupational Therapy Research	4.00	75.0%
New drugs and therapies for asthmatics	4.00	75.0%
Research the effects on school children of education in a recovery model approach to mental illness, in terms of a possible reduction in negative attitudes and beliefs	3.87	75.0%
Investigate gaining access to services: what are patient's experiences of getting into the system.	3.75	75.0%

Items that gained consensus at Round 3 (ranked by mean)

RESEARCH PRIORITY	Mean	Consensus Level
Research the role of mutual help in recovery from mental illness	4.71	85.7%
Conduct an investigation into the possible barriers related to professional, specifically psychiatric labels, and how to address them	4.37	75.0%
Dyslexia research with regard to the therapy professions	4.12	75.0%
Conduct studies with 'real' asthma patients as opposed to selected groups who meet certain criteria.	4.00	75.0%
Advance biomedical research into diabetes	3.87	75.0%
Research cultural narratives and personal beliefs about mental illness and how these might be affected by professional training	3.75	75.0%

Items that did not gain consensus (ranked by mean)

RESEARCH PRIORITY	Mean	Consensus Level
Evaluate patient perceptions of diabetes	4.00	62.5%
Explore the question of therapy availability on the medical card	3.87	62.5%
Research availability of therapy professions for people with disabilities.	3.75	62.5%
Investigate the effects of training on service users with a leadership role	3.75	62.5%
Promote equitable access to therapies through health service research.	3.75	62.5%
Research the prevalence of diabetes and its complications	3.75	50.0%
Availability of alternative therapies e.g. acupuncture	3.50	50.0%
Research into Angelman's Syndrome	3.42	28.6%
Research into outdoor pollutant triggers for asthmatics	3.37	37.5%
Research that compares hospital versus domiciliary care by therapies professions.	3.37	25.0%
Continued research into the iNKT cells in asthma carried out by Dr John Faul	3.28	28.6%
Research into the effects of smoking on asthmatics, specifically its impact on the effectiveness of inhaled medications	3.25	32.5%
Environmental quality research, including indoor non-occupational air, indoor office (non-industrial) air etc.	3.00	12.5%