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**Introduction**

*Delivering for Health* presents a new vision for NHSScotland. It is a vision based on delivering care close to where people live with timely access to services and a strong emphasis on anticipatory care and patient self-management of long-term conditions.

Population demographics of Scotland are changing. There will be a greater number of people living with long-term conditions and co-morbidities in future, with a higher proportion of older people in the population. NHSScotland needs to change to respond to new demands. Allied Health Professions (AHPs), whose work already tends towards the management and rehabilitation of long-term conditions and co-morbidities, health improvement and anticipatory care, are in a strong position to contribute their expertise to the delivery of the new health agenda.

Significant opportunities exist for AHPs to engage with developments in service delivery through redesigned services and developing new roles. AHPs already know and value the benefits of working in partnership with patients, carers, other professions and care agencies and have expertise in a range of assessment, diagnosis, treatment and rehabilitation interventions that can be more fully exploited in health terms.

To do this, all of the allied health professions need to look beyond traditional methods of providing services and engage in service redesign and role development. This will enable them to develop existing patterns of working and create new models of service that reach across historical professional and service boundaries.

The AHP resource within NHSScotland needs to be clearly identified in terms of numbers and profession, but AHP activity, competencies and quality of service delivery also need to be understood to enable AHP resources to be used effectively to balance capacity with demand. A systematic approach to managing and measuring workload will ensure information about how clinical time is used to deliver patient care is more robust and consistent and will support workload assignment approaches for individual practitioners.

There is a recognised need for real-time workforce data that is consistent, evidenced, relevant and meaningful. The underpinning approach to ensuring adequate staffing levels is workload management and measurement and efficient use of resources in terms of skill mix and productivity. This project provides a starting point for the AHPs in NHSScotland to engage with and develop their resource and workforce planning agenda.

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**Foreword by the Chief Health Professions Officer**

Within the fast-changing landscape of health and social care services, and in response to demographic changes and technological advances, the enabling approaches embedded in allied health professions’ (AHP) practice have never been more recognised and valued. Furthermore, there are many opportunities for the allied health professions as part of a skilled and flexible workforce in meeting the challenges ahead, to develop their expertise and their services for the benefit of the people of Scotland in line with the vision set out in *Delivering for Health* (SEHD 2006).

In order to achieve this there is a pressing need to release the capacity of the AHPs but this needs to happen in a measured and informed fashion, through planning and developing the AHP workforce.

The National Workforce Planning Framework (SEHD, 2005c) was published in August 2005 and it was developed to ensure that NHSScotland maximises the efficiency and effectiveness of its workforce. The cycle for workforce planning has been introduced and this allows for assessment of the number and type of staff required for the future, closely aligned to service, financial and education planning arrangements.

To support the workforce planning cycle it is crucial that systematic approaches to workload measurement and management are developed and embedded in AHP management practice to ensure the information that underpins planning is as robust as possible.

This document has been developed following national consultation with the professions which marked the beginning of the process of identifying and quantifying the AHP resource in NHSScotland in a meaningful and comprehensive fashion, linking activity, capacity, demand and capability. It highlights a number of related factors, such as service redesign and education and training where there are linked work streams that will also contribute to informing national decisions on overall supply as well as future training numbers.

This document offers an action plan that will mark the starting point of an exciting but challenging process for the Allied Health Professions workforce in Scotland, and I commend it to you.

Jacqui Lunday
Chief Health Professions Officer
1. Workload measurement and management

The AHP workload measurement/management project was identified in the AHP strategy, Building on Success: Future Directions for the Allied Health Professions in Scotland (2003), as a piece of work requiring national leadership which would build on the approaches taken by other professions.

The project aimed to establish which workload measurement and management systems are currently used by the AHPs within NHS Boards in Scotland. It also aimed to reach a consensus on the tools and approaches that are core to workload management/measurement for Arts Therapy, Dietetics, Physiotherapy, Podiatry, Prosthetics and Orthotics, Occupational Therapy, Orthoptics, Diagnostic and Therapy Radiography, Speech and Language Therapy that constitute the nine Allied Health Professions. A full description of the method used for the project can be found in Appendix 1, and a resumé of the most common approaches currently in use by AHPs in Appendices 2 and 3. The project’s Steering and Action Groups memberships are given on page 33.

Workload measurement and management systems

A workload measurement and management system needs to be dynamic to respond to external influencing factors such as changing patterns of activity, changing patterns of work and flexible working arrangements, service redesign and professional role development.

Tools and approaches used for measuring and managing workload and to inform staffing requirements need to be valid, reliable and easy to use in terms of data collection. They need to:

- take account of activity and any back log or waiting that exists within the system
- include measures that can match capacity to demand
- take account of the capability of the workforce, the skills and competencies needed to deliver care
- take account of systems of monitoring the quality of care delivered.

For the purpose of this document the framework for considering the core components of a workload measurement and management system are based on A guide to Service Improvement – Measurement, Analysis Techniques and Solutions (SEHD 2005).1

- **Activity** – the work done, i.e. the throughput of the system
- **Capacity** – all of the resources required to do the work, including staff and equipment
- **Demand** – all requests or referrals into the service from all sources
- **Capability** – the skills and competencies required to carry out the activity

### Activity

**Activity is the work done, the throughput of the system**

Accurate measurement and recording of activity levels within the AHPs is the starting point for assessing the capacity required to meet demands on resources. It is essential in identifying gaps in current service provision and in providing a baseline for identifying and planning for future need.

Within this context, it is essential to be clear about the purpose of the service provided and how it fits with patient needs and organisational priorities. This may have changed considerably from its historical origins and AHP leaders need to consider if the service is delivering what is needed now and for the future. There also needs to be clarity about measuring the impact the service is making on patient needs and organisational priorities. The starting point for this is activity analysis for the service.

Much AHP clinical activity is described in terms of direct and indirect patient contact within an individually assigned caseload. Analysis of clinical activity is mapped against time available that can be measured in agreed timed units or sessions but ultimately is calculated in hours available per week. Other activities routinely included in activity analysis include managerial, organisational and professional development activities and mechanisms for recording, monitoring and reviewing these activities need to be included.

The National Clinical Datasets Development Programme (NCDDP) is developing terminology relating to clinical activity and caseloads, with associated case descriptors. These will need to be adopted by all services in order to ensure consistency in what is being measured.

### Caseload

**Caseload** is one of the most common ways of dividing AHP activity into manageable workloads for individuals. Definitions of clinical caseload or clinical case management vary and include:

- frequency and type of contact
- type of intervention
- case complexity
- case weighting.

Working definitions of caseload include:

- the number of cases on an individual AHP’s list for which he or she has a duty of care
- the number of cases handled (as by a clinic) in a particular period (Medline Dictionary).2

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2. [URL: www.medline.org]
Case complexity has emerged as a significant variable in decision making about workload management at individual, team and service level. Case complexity is multi-dimensional and includes:

- consideration of co-morbidities
- social circumstances and emotional factors
- complexity of intervention(s)
- identification and management of clinical risk
- factors relating to complex decision making.

The International Classification of Functional Disability and Health defines a standard language and framework for the description of health and health-related domains that helps to describe changes in body functions, structures, activities and participation, including environmental factors. It describes clearly the clinical components of case complexity.

An agreed and functional definition of case complexity, however, does not currently exist for the AHPs. An overall definition that stipulates the core components is needed to facilitate benchmarking across services and departments.

Approaches such as case weighting and service weighting are currently used to reflect ‘complexity’ or ‘severity’ of the cases managed by individuals and by the service.

Case weighting is a system of prioritization and the parameters used within the system will differ for each of the allied health professions. The caseload status will determine the level of involvement/commitment to care required from each profession at each stage of the patient journey (AHP Census 2005 ISD).4

The professional activities AHPs undertake include clinical supervision and education and training of others. These need to be consistently factored into activity measurement to create meaningful statements about service and individual capacity. Identifying the characteristics of workload in this way, defining them and assigning the characteristics to costs, enables the workload to be made explicit, be distributed appropriately to deliver the core business making explicit links to financial planning and resources.

Activity analysis also needs to take account of the context in which the activity takes place, including the human elements and any unforeseen events. The complexity of individual work dynamics within work areas supports the need for sensitive and meaningful activity analysis in order to ensure the staff resource is being used to best effect, to enable staff to achieve their potential within the service and to demonstrate best use of public money.

Data standards and definitions about clinical pathways will make explicit clinical activity within clinical care groups which will relate to Health Resource Groupings.

**Recommendations – activity**

- AHP leaders and AHP professional managers should work with national e-health leads in defining secondary use data sets from clinical records so that better use can be made of the data they have to support the measurement of activity.
- The national lead NMAHP for eHealth should work with AHP leaders to support the consistent implementation and use of relevant terminology for case descriptors developed for clinical datasets within the eHealth project when measuring workload.
- The national lead NMAHP for eHealth should work with stakeholders to define case complexity. An expert group of AHPs should be convened to further this initiative.

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3 http://www3.who.int/icf/icftemplate.cfm
4 http://www.isdscotland.org/isd/
Systematic and dynamic approaches to capacity management and planning are needed to ensure services respond to developments and change, that resources are used effectively and efficiently, and that roles developed are responsive to changing patient and service need.

Understanding trends in the AHP workforce such as age, entry and exit from the service and using this information will enable predictive approaches to be adopted to changes in staff profile and inform development of the skill mix needed to provide sustainable services.

Utilising skills effectively (skill mix) across the workforce ensures that the skills of each member of the team are used optimally at each level. Changing the way services are delivered and using the skills of different staff groups appropriately can result in significant improvements to services.

In order to optimise capacity a service requires a mix of caseload and the empowerment of staff to manage. However, with empowerment comes accountability and that requires routine reporting of activity and of outcome within organisational structures.

AHPs provide diverse services in NHSScotland and flexible working patterns are increasingly being introduced to AHP services. Some provide unscheduled care services delivered over 52 weeks (on-call physiotherapy services and diagnostic radiography services, for instance) while others, such as therapy radiographers, work extended days. Traditional patterns of service delivery times (e.g. Monday to Friday, 9.00 am – 5.00 pm) will continue to evolve and alter to meet the changing needs of patients.

This will potentially impact on location and equipment needed to deliver the core business and services are already adopting proactive approaches such as using local authority and other premises where possible.

The Renton Integrated Healthy Living Centre

This is a service for people in the Lomond area with physical impairments due to neurological disease. The main aim of the service is to assist people to live as active and fulfilling a life as possible. The service is provided for anyone between 16-65 years who suffers a physical disability caused by a neurological condition. There is a multi-disciplinary team with links to other agencies based at the Renton Integrated Healthy Living Centre, which offers facilities for group meetings, exercise classes and providing a clinical centre for assessment and treatment. The service provided is based on individual need ranging from telephone advice to full assessment and rehabilitation programmes.

www.enablement.info/about.cfm
Whatever the level of service provision, the capacity to deliver needs to be calculated in a way that takes account of planned leave and enables backfill needs to be accurately identified and addressed.

The AHP strategy for Scotland, *Building on Success: Future Directions for the Allied Health Professions in Scotland* (2003), recommends that backfill arrangements be put in place by NHS Boards to ensure service continuity by taking account of planned leave, including maternity/paternity leave. This needs to be implemented throughout the country, particularly in the light of changes in employment terms and conditions, to ensure the AHP resource is managed equitably with other health care professions within NHSScotland.

Equally, AHP Leads need to factor in allocated time for continuous professional development (CPD), particularly in view of results from the workload scoping exercise which indicate that only 58% of AHPs in Scotland receive the recommended half-day per month allocated time for CPD. CPD outputs need to be monitored and evaluated at individual and service levels to demonstrate the added value CPD for AHPs brings to patients, services and individuals. There is already evidence to suggest that the development of teams leads to better outcomes for patients as well as having a positive impact on the recruitment and retention of staff.5

It is important to identify from the analysis of activity which tasks are done by whom, managing how tasks are apportioned and ensuring they are assigned appropriately. This is core workload management that makes sure the capacity of the service is clearly defined in terms of skills and competences and that the staff resource is managed effectively.

Activity and task description provide a mechanism by which individual and team workload can be identified and considered within a service. This is of particular relevance to core skills in relation to role definition and role development. Several tools have been developed to support this including tools for role redesign, activity cards and time-plotting patient journeys which takes patient related activities as its focus and facilitates the appropriate distribution of tasks and related activity and can be found on the Skills for Health website.6

Collection of accurate activity data and information, combined with appropriate activity and task allocation is a core management function that ensures the capacity of the service is both identified and managed effectively.

The specialisation of services and specialist provision in many of the professions has led to the development of top-heavy services with few junior posts. This model does not support the growth and development of junior staff. If we require more AHP practitioners, we need more

flexible career pathways to build opportunities for the future and reviewing the knowledge and skills required for posts has the potential to release capacity within services. Flexibility in career options and staff development also applies to support staff and trained support staff who enrich the skill mix of services.

Methods for increasing capacity are not solely about adopting imaginative approaches to skill mix and role development when redesigning services; they also incorporate proactive approaches to vacancy management and recruitment processes. An example from NHS Fife is given on page 25. Adopting a more proactive approach to recruitment and resource management based on robust intelligence and data can enhance capacity within existing organisational and financial arrangements.

Effective work design and planning can contribute to improved services for patients, more rewarding careers for staff, and benefits for the organisation through more efficient delivery of services. AHP services need to be supported in adopting forward-focused and proactive approaches to service and business planning by using a systematic approach to capacity planning.

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5 The Effectiveness of Health Care Teams in the National Health Service – Report 2001 Aston Centre for Health Service Organisation Research, Aston Business School, University of Aston, Human communications Research Centre, Universities of Glasgow and Edinburgh, Psychological Therapies Research Centre, University of Leeds.

6 www.skillsforhealth.org.uk/
Demand
Demand on the service is all the requests or referrals into the service from all sources.

Demand for AHP services has never been higher as a result of better understanding of AHP skills and their contribution to health and social care. Demographic changes within Scotland are likely to increase demand in, for example, long-term condition management and rehabilitation needs. Demographic changes and trends in the AHP workforce will also have an impact on how this demand can be addressed.

But patients’ experiences of health systems, including AHP services, are often somewhat disjointed and not sufficiently flexible and responsive to their needs. Stakeholders in the consultation for the Rehabilitation Framework and the AHP Patient Focus, Public Involvement working group and have already identified better and more flexible access to AHP and rehabilitation services as a priority.

For this to be possible, a well ordered approach to managing the patient’s journey through the system needs to be adopted. A strong focus on patient experience is needed, looking at entry to and exit from services as well as the interventions offered.

Exploring alternative patient pathways, moving away from traditional ‘gatekeeper’ models and promoting open access and self referral to services at times when patients want them can be achieved through partnership working with other agencies, organisations, service users and patients. Clearly articulating the patient journey stage or caseload status will determine the level of involvement/commitment to care at each point on the patient’s journey (AHP Census 2005, ISD).

Systems for demand management take account of entire and multiple patient pathways and define service-level best practice at each key stage in the process. Good quality demand management systems enhance access and meet the individual needs of clients effectively and in a timely fashion. As the name suggests, demand management activities must be able to take account of the whole system if bottlenecks are not simply to be transferred from one section of the patient pathway to another.

There are many influences on demands placed on service. Managing demand is a key component of ensuring access to services and reducing waiting or queuing within a service. Despite common perceptions to the contrary, demand is predictable using trend analysis.

Collation of the following information is considered core in the management of demand:

- waiting times
- peaks and troughs of activity (e.g. planned admissions to hospital)
- service developments
- seasonal adjustments
- evidence based changes in clinical practice
- predictive analysis using existing data
- explicit information on what the service provides – core business
- anticipated change to reflect predicted needs of the local population.

Predictive approaches to demand management and service planning need to be developed in consideration of equity in service provision and access to care.

Typical elements of AHP demand management systems were identified by the Additional Support for Learning Action Group (Children’s Services 2005). They included:

- referral guidelines and information to ensure clarity and continuity
- prioritisation systems/triage to support evidence-based interventions for patients with the greatest needs
- clear goals/packages of care with clear outcomes: engaging service users in the process is key in facilitating transformational change and better patient outcomes
- organisational protocols and clinical protocols where appropriate to support scheduled and unscheduled care
- clear patient pathways/patient journey: this avoids unnecessary delays and ensures the patient’s access to the right health care professional
- profile of individual and team caseload to make best use of skills
- discharge policies to ensure appropriate and timely discharge and onward referral.

Demand management systems often form all or part of exercises labeled as ‘service redesign’, ‘service re-engineering’, and ‘organisational review and development’. In order to ensure that a demand management system is comprehensive, it is essential to have a clear understanding of, and ability to map, the patient journey.

Demand management and capacity measurement are influenced by measures of productivity. These include vacancy rates, staff turnover rates, workforce stability and sickness absence monitoring and the need to meet the 4% target reduction in sickness absence rates across NHSScotland.

8. NHS HDL (2006) 51
A comprehensive and explicit system of workload measurement and management will inform impact and value for money studies. Enhancing the parameters of the clinical dataset to include agreed definitions of caseload and case complexity will add to the robustness of data routinely collected and will lead to more effective secondary use of data. In addition, seeking information from existing data such as the age profile of the current workforce will support future service and workforce planning and resource allocation. Each AHP service needs to introduce an appropriate demand management system as part of its workload measurement and management system that is supported within the local NHS Board area. An example of a demand management system introduced in NHS Grampian is its workload measurement and management system that is supported within the local NHS Board area. A planned and incremental approach to growing capacity through appropriate skill mixing within and between teams needs to be underpinned by quality assurance systems that develop the capabilities to deliver safe and effective care and interventions.

In the course of a patient’s journey through the health system, it is essential that the skills needed to deliver appropriate interventions at each stage are available. Consideration of task and activity linked to the identification of skills and competencies required to deliver the activity need to be made explicit so that appropriate interventions are available. Support staff have a recognised and important role in ensuring patient flow throughout the patient journey and contributing to the sustainability of service provision.

The allocation of workload within departments, teams and to individuals needs to be carried out in a systematic way. It needs to be transparent, risk assessed and controlled for quality.

**Competencies**

Competencies developed by Skills for Health in partnership with the NHS provide a portfolio on which the service can draw. They are mapped to Knowledge and Skills Framework (KSF) levels and offer a resource to build competence profiles. The Skills for Health competencies are National Occupational Standards, ensuring transferability and recognition across the United Kingdom.

The KSF provides the mechanism for supporting professional and personal development of each member of staff, and promotes a positive approach to lifelong learning. It defines levels of underpinning knowledge and skills and the associated competencies necessary to undertake different functions within health care services that are weighted for complexity by activity and decision making. The KSF supports staff development and learning as well as career progression in order to ensure competent practitioners.

To provide safe and effective interventions and care, it is essential that individual and team competencies are matched to service capacity: the competence outlines for posts introduced within pay modernisation under the KSF provides the necessary structure.

Knowing the competencies required to fulfil functions and roles to provide quality services will inform the training needs of staff and enable relevant learning programmes to be developed, ensuring an appropriately trained and skilled workforce capable of providing timely and effective care.

**Recommendations – demand**

- AHP leaders and professional managers should work in a co-ordinated fashion to identify where AHP expertise can be used to best effect throughout the patient journey including anticipatory care and prevention.
- AHP Leaders and AHP professional managers should work together with Organisational Development Leaders to ensure that redesign training embedding patient focus and public involvement is routinely available for AHP leaders, managers and team leaders.
- AHP leaders and professional managers within NHS Boards should introduce demand management systems in their services that are derived from process mapping the patient journey.

**Capability**

The capability of a service to deliver what patients and service users need can be considered as the sum total of the competencies and skills of the individuals working within it – including trained support staff, junior staff, specialists and consultants.

The shape of the workforce required to deliver future services and changing models of care will need to be further developed. A planned and incremental approach to growing capacity through appropriate skill mixing within and between teams needs to be underpinned by quality assurance systems that develop the capabilities to deliver safe and effective care and interventions.

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To provide safe and effective interventions and care, it is essential that individual and team competencies are matched to service capacity: the competence outlines for posts introduced within pay modernisation under the KSF provides the necessary structure.

Knowing the competencies required to fulfil functions and roles to provide quality services will inform the training needs of staff and enable relevant learning programmes to be developed, ensuring an appropriately trained and skilled workforce capable of providing timely and effective care.
Competency-based approaches within services and service redesign are also crucial to retaining existing staff. Career pathways and opportunities need to be created to ensure the workforce remains skilled, flexible and available. It is important that the talent of the whole workforce is expertly managed and opportunities for development and career progression made available to all and that managed approaches to succession planning are in place.

It is vital that AHPs are able to identify the competencies that are core to their profession, these competencies will relate to a wide range of clinical areas such as:

- working with vulnerable people
- unscheduled and planned care
- management of long-term conditions
- anticipatory care
- supporting and empowering individuals to reach their potential and self manage their conditions.

AHPs must be able to articulate and demonstrate their competencies in these areas as the focus of health service delivery moves to improving health as well as health care.

**Leadership**

*Delivery through Leadership (SEHD 2005)* outlines the context and provides the framework for developing leadership capacity and capability in NHSScotland. Leadership needs to be developed at all levels of organisations within managerial, clinical and professional contexts.

There is continued investment in professional leadership initiatives, and the importance of developing clinical leaders to drive service improvement and effectively manage teams to provide excellence in patient/client care is recognised. It is also important to support clinical leaders in developing managerial knowledge and skills.

Leaders tend to move into managerial positions via clinical routes. They are usually experienced clinicians who need to develop into effective ‘positional’ leaders through access to comprehensive leadership development opportunities. This must be seen as being distinct from management development.

The AHP strategy, *Building on Success; Future Directions for the Allied Health Professions in Scotland (SEHD 2003)*, recommended the development and introduction of AHP leadership structures within NHSScotland. The emerging Community Health Partnership structures in Scotland have lead AHP roles embedded within them, and it is crucial that leadership capability continues to be developed within NHS Boards and across the professions in order that the AHP resource is effectively deployed.

NHS Education for Scotland carried out a scoping exercise on the learning needs of the AHPs (NES 2006) and this highlights the need for both clinical and managerial leadership training for the allied health professions.

**Decision making**

The AHP workload scoping exercise revealed a common approach emerging within the AHPs on decisions about caseload and workload allocation and the spread of activity type in relation to staff grade (Figure 1).

**Figure 1. Pattern of workload allocation in relation to staff grade**

[Diagram showing the pattern of workload allocation in relation to staff grade.

Source: AHP workload scoping exercise


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Allied Health Professions

*Workload Measurement and Management*

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**Figure 1. Pattern of workload allocation in relation to staff grade**

[Diagram showing the pattern of workload allocation in relation to staff grade.

Source: AHP workload scoping exercise

The AHP workload scoping survey identified a specific need for training and education of AHP leaders and managers in workload measurement, management and workforce planning. A national approach with an agreed methodology for workload measurement and management, combined with the use of the electronic health record that provides real-time data, will enhance the leadership and management function within the AHPs and support their contribution to workforce planning.

As Figure 1 shows, patient-related and clinical care ratios alter with increased seniority, as do input to professional activities such as clinical supervision, education and training of others. Managerial tasks are made explicit when these become part of the post.

This does not tell us, however, whether the tasks undertaken at each grade are appropriate for the staff grade and level of competence; these need to be made explicit to provide sound evidence for decisions and to demonstrate that resources are being used appropriately and are accounted for in relation to the cost of AHP services.

It is important to ensure that management decisions are based on the best evidence available. It is therefore vital that systems are in place to collect the evidence on which to build and take decisions. In future, the use of standardised language in clinical recording will facilitate this.

Decision making within this context has been described as professional judgement. Knowledge of the activity and staff resource and familiarity with competencies linked to staff grade were reported as being key components of this decision-making process, underpinned by knowledge of available skill mix within teams, the total resource available including associated risk assessment.

Decisions based on professional judgement have been the main determinants of patterns of service delivery within health systems over many years. There has been a shift in approach over recent years in a number of professions through guidance on caseload management and staffing ratios to populations. To better define the staffing requirement it is possible to identify some of the influencing factors embedded in professional judgement. These include:

- knowledge of caseload
- caseload status
- case complexity
- knowledge of the intervention
- knowledge of the resource unit

Challenges exist in defining the full range of variables that impact on caseload and caseload management but the effect on workforce planning, client service provision and staff management is recognised.10

Using professional judgement in isolation for workload measurement and management is an approach that is subjective, lacks transparency and credibility out with the profession. Workload management is a complex task which can be broken down into various components for analysis and this will lead to a better understanding of the needs for safe and effective AHP service provision. Professional judgement as a method of decision making in combination with objective measures, may have a role to play in day-to-day decisions about safe and effective service provision.

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2. Workforce planning

The future demands on health services in Scotland and changes in services mean that future workforce needs be considered. A bottom-up approach to workforce planning is needed, with a consistent and reliable means of collecting robust information.

Workforce planning is being taken forward under the National Workforce Planning Framework 2005 and in the first year is being considered by staff grouping. Workforce analysis of each profession within the grouping needs to be carried out within the context of changing services. Workload measurement is therefore essential to identify what the current AHP resource is, what they currently do, and how the resource is distributed and managed within NHSScotland and whether this is optimal.

Traditionally, workforce planning has focused mainly on workforce supply, planning numbers of staff within traditional staff groups, without fully considering the service demands. There is a need to move from this focus on input to a focus on output, considering the services we need now and in the future and the resultant skills, competencies and roles necessary for the effective delivery of the service.

This approach requires us to ‘slice’ the information we hold on staff differently and show it in relation to services as well as across staff groups. Service delivery cuts across both professional categories and organisational structure. The new coding structure being developed as part of the Scottish Workforce Information Standard System (SWISS) will facilitate this type of analysis, analysing the workforce by ‘service provided’ rather than professional category or organisational structure.

Systematic approaches will enable the resource to be accurately described, effectively deployed and cost-efficiently administered, maximising the use of expertise, knowledge and skills to ensure sustainable services. Consistent approaches are essential in the redesign of services and in developing roles as services respond to the changing health needs of the population.

AHPs can make an effective contribution to workforce planning through basing decisions on reliable data and making clear links between quality improvement and business planning. AHPs need to further develop their use of workload measurement and management systems and be involved in local and regional workforce planning. There is a need for identified AHP leadership within NHSScotland to take forward findings of this project at NHS Board, Regional and national levels, so that consistent methodologies and co-ordinated approaches to workload measurement and management can be introduced in the allied health professions across NHSScotland within the current workforce planning structure.

Recommendations – workforce planning

- A national AHP steering group should be convened to support the implementation of the workload measurement and management recommendations.
- AHP Leaders working in partnership with regional workforce directors and NHS Boards, should introduce systematic and agreed methodologies to workload measurement and management and build capacity and capability in workforce planning within the allied health professions.
3. Quality

### Quality and clinical outcome indicators

Comparative clinical quality indicators are measures derived from routine data sets that relate to process and outcomes of clinical interventions.

Any workload measurement system needs to ensure service quality that is underpinned by a clinical evidence base and is supported by practice development. National and professional standards and guidelines are intrinsic to this and need to be referenced within the workload management and measurement system.

The AHPs use a variety of professional body and national quality standards, in addition to best practice guidance where available, as quality measures. There is variability among individual Professional Bodies on the extent to which these have been developed for members.

The project’s consultation process revealed a strong desire for quality measures to be embedded in a workload measurement and management system. There was also an expressed expectation that the national data standards project ensures quality measures or indicators are embedded in clinical datasets.

Using selected details from routinely recorded health care information would provide AHPs with the information they need to improve services for patients, adhere to the cycle of continuous quality improvement, and support them in their role as meaningful users of comparative clinical data to improve the delivery of safe and effective interventions and care.

In turn, it is essential that balanced and cost effective approaches towards the quality of patient care, access to services and staff development are adopted. The delivery of services that are responsive to patients needs and minimise waits is essential.

The key components of quality given and defined here are from the Outcome Focused Management Pathfinder Project established by the New Zealand government. This project was set up to focus planning, delivery and performance review and integrate outcome information into an outcome focused system of government as well as providing practical guidance to results based management.

These key components are defined as follows:

### Outcome measures

Outcome measures need to be clearly defined and measurable to enhance management decision making in alignment with the purpose of the service and organisation. All need to have confidence in the integrity of underlying data that support decisions based on outcome measures. Outcome measures can relate to particular groups or service areas in which improvement is sought.

### Outcome indicators

Outcome indicators can be identified from outcome measures. They are used to:

- Identify where problems persist
- Monitor trends
- Identify where change is desirable
- Set and track performance goals.

By providing information about a specific aspect of health or health care at a specific point in time, they provide useful feedback on the effectiveness of interventions and produce ongoing opportunities for services to refocus resources to improve outcomes in priority areas.

### Impact assessment

Impact assessment is a process for confirming which type of interventions produce positive outcomes. Its function is to make individual interventions work as well as possible. Both qualitative and quantitative measures can be used in impact assessment needed to determine whether the desired change has been successful. They are also used to assess the costs and benefits of services and to identify where funding can be used to best effect, informing shifts in resource to interventions that improve outcomes more cost effectively.

### Targets

Targets can be used where outcome indicators suggest disparities exist between groups/services/areas or to promote general improvement across a population or service area. They can also be used to guide learning and to encourage performance improvement. Targets do not have to be an absolute value, but need to be cost effective and achievable. It is important to consider previous performance when setting targets.

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As an example, if we review the information from the waiting time report derived from the AHP Census 2005, it shows that approximately 94% of patients referred to AHP services are seen within 18 weeks of referral. Service standards may advocate that patients should be seen, for example, within 8 weeks of referral. Introducing a target waiting time would assist in promoting more consistency between services and also general improvement across AHP services.

**Clinical indicators and patient outcomes**

The first set of health indicators was published in Scotland in 1993 by CR-OC, the clinical outcomes working group set up by the Clinical Resource and Audit Group (CRAG) and one of the key aims was to raise awareness of the availability of such information and of the ways in which it could be used. Challenges do remain in ensuring that these indicators lead to improvement in the quality of care provided for patients. NHS Quality Improvement Scotland has published reports on clinical outcome indicators and health indicators respectively and they continue to work with the health service to identify the data needed to support quality improvement and supports the service in collecting and using this information to guide decisions at all levels.

There is still a need to evidence the benefit to patient care of systematic, system-wide measurement of indicators. As the allied health professions work as part of multidisciplinary teams, patient outcomes may be affected by the actions and interactions of the various members of that team however, profession specific or profession sensitive indicators are recognised by the professions as desirable.

There is an ongoing need for AHP clinical and professional leads to ensure wide engagement in, and influencing of, the development of national quality indicators. AHPs need to bring their knowledge and expertise to bear through participation and engagement with NHS Quality Improvement Scotland (NQIS) and ISD, supporting and improving care for patients.

**Clinical governance**

The responsibility for providing high quality clinical care to patients is a key responsibility for NHS Boards. Chief Executives are accountable for clinical governance in the same way as they are accountable for the proper use of resources. Suitable local arrangements need to be in place to provide the assurances that this duty is being met.

The underpinning components of clinical governance are:

- Significant event analysis/risk management
- Analysis of complaints
- Continuing Professional Development (CPD)
- Professional leadership within the functional clinical teams

A system of clinical governance is created when these parameters are integrated and they provide a framework for implementation.

The AHPs aim to provide the highest standard of care to patients at all times, and implementing the framework is essential. Clinical governance presents clinicians with an opportunity to introduce systems into their daily routine which will enhance their ability to deliver high quality care, and simultaneously improve job satisfaction. It is therefore vital that AHPs can describe and quantify their activity, the capacity and the demand on their services in a clear and transparent way and that clinical governance is embedded in AHP business.

**Recommendations – quality and outcomes**

- AHP Leaders and professional managers should ensure that national guidelines and standards of care are incorporated into workload management systems.
- AHP Leaders should work to address lengthy waits for patients and service users across priority care groups, in particular children's and diagnostic services in line with current and future targets for national waiting times.
- SEHD, in partnership with the AHP eHealth Leads, NHS QIS and ISD, should explore the feasibility of developing clinical quality indicators for AHP services evidenced from clinical data sets within the wider national context.
4. Conclusion

Model of workload measurement and management

Workload measurement and management is a series of interlinking activities that relate to information recording, collection and usage. It has a fundamental and central role to play in providing the evidence base for the design and planning of services.

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**Example 1**

**NHS Fife**

NHS Fife have introduced proactive recruitment approaches. They established a bank of local qualified, technical and administrative staff using zero-hours contracts. Junior Physiotherapists, without permanent posts, were invited to join the bank following a formal selection process.

The Head of Therapy and Rehabilitation (Acute Services) gained the support of the Director of Nursing, Head of Finance and Chief Executive NHS Fife who agreed an approach to over-establish the Physiotherapy Department on the understanding that the net spend on staff would remain within the annual departmental budget. The Physiotherapy Service has also been able to use any under spend to fill vacancies in the services they provide under service level agreements.

This arrangement has met with such success that it is being introduced more widely across NHS Fife. Having a bank of staff already inducted and aware of the local services has improved recruitment to other posts.

Using this model, the Physiotherapy Department budget targets in NHS Fife have been achieved with only minor drift due to a large number of maternity leaves. A significant number of the graduate physiotherapists without jobs have also been able to use the experience to gain permanent employment.

Rob.packham@faht.scot.nhs.uk

**Model for Proactive Recruitment – Physiotherapy**

**Turnover**

8% turnover (national average for physiotherapy) in a staff complement of 100 = 8 staff

Average salary of £30k including on costs

Total cost = 25% (time taken to fill a vacancy is usually 3 months) x 30 x 8 = £60k

**Maternity Leave (under current arrangements)**

5% of staff complement (national average for physiotherapy) of 100 = 5 staff

Average salary of £30k (including on costs)

Total cost = 12.5% (3 months full pay and 3 months half pay so 12.5% available) 30 x 5 = £18,750

Total Available for Over Establishment = £78,750
NHS Grampian

Maroondah Approach
M.A.C.S. was devised at Maroondah Hospital, a large community-based General Hospital in Victoria in Eastern Australia. The system has been adopted in other children’s services in Australia and New Zealand as well as in the UK and Eire. Training workshops are available in the UK every two years, or sooner if there is a demand.

M.A.C.S. is an integrated service delivery system suitable for all Allied Health Professions and aims to effectively eliminate waiting through integrating new clients into the caseload immediately. The planning process matches capacity with predicted demand over the year. Critical elements of M.A.C.S. at this stage are weekly assessment/appointment, cycles of therapy in groups, ratio of appointments set to a timetable and carer training.

A key element of M.A.C.S. is the shared responsibility between service provider and service users linked to therapy outcomes. It is a patient-focused approach with joint therapist/parent goal setting. Application in Speech and Language therapy children’s services in the cycle of therapy involves direct contact with parents and Lead Therapist in a predictable way. Joint clinician-carer (carers being parents, grandparents, childcare workers, teachers, teaching assistants and guardians) goal setting, carer training, guidelines for implementation and participation in all therapy are vital elements.

Referral
Each new referral is placed on a central waiting list, prioritised and allocated to a named Lead Therapist. Parents are invited to attend an information session about M.A.C.S. so that they are made fully aware of the delivery process of future therapy. Initial assessment is carried out, the therapy partner identified and joint agreement reached on care aims, outcomes and expectations.

M.A.C.S. Coaching Groups
These are small groups supported by two group leaders. An example of these are; Parent Child Interaction, Language, Listening & Attention, Stammering, Social Skills, Phonology and Grammar & Narrative. The groups run on a 6- or 8-week cycle. At the planning stage, the numbers of groups, dates, times and locations for group therapy are determined. The child and parent/therapy partner are invited to a group and asked to confirm attendance, in the event that attendance is not confirmed the appointment slot is offered to another patient.

Benefits
The M.A.C.S. approach facilitates effective communication with parents via information sessions, coaching, agreeing joint goals, the appointment system (reduction of missed appointments) and Lead Therapist role. It has also enables the provision of more effective therapy, as Therapy Partners deliver intensive therapy. The coaching approach ensures effective practice due to the skill-mix opportunities that exist within the system.

Example 2

5. Summary of Recommendations

<table>
<thead>
<tr>
<th>Activity</th>
<th>By whom</th>
<th>By when</th>
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<tbody>
<tr>
<td>• AHP leaders and professional managers should work with national e-health leads in defining secondary use data sets from clinical records so that better use can be made of the data they have to support the measurement of activity.</td>
<td>Lead NMAHP e-Health, AHP Leaders/AHP Professional Managers</td>
<td>2007</td>
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<tr>
<td>• The national lead NMAHP should work with AHP leaders to support the consistent implementation and use of relevant terminology for case descriptors developed for clinical data sets within the eHealth project when measuring workload.</td>
<td></td>
<td>2007</td>
</tr>
<tr>
<td>• The national lead NMAHP for eHealth should work with stakeholders to define case complexity. And expert group of AHPs should be convened to further this initiative.</td>
<td></td>
<td>2007</td>
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<table>
<thead>
<tr>
<th>Capacity</th>
<th>By whom</th>
<th>By when</th>
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<tbody>
<tr>
<td>• The SEHD will work in partnership with the Regional Workforce Coordinators and NHS Boards to develop an AHP workload infrastructure to support AHP workforce planning.</td>
<td>National Workforce Planning Unit, CHPO, Regional Workforce Directors</td>
<td>Dec 2006</td>
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<td>• AHP leaders should build flexibility within existing capacity and budgets by adopting a range of strategies to minimise gaps in service to ensure continuity by implementing proactive approaches to recruitment, planned leave and staff turnover.</td>
<td>AHP Leaders/AHP Professional Managers, Workforce Planners</td>
<td>2007</td>
</tr>
<tr>
<td>• AHP leaders and professional managers should regularly measure activity, demand and throughput to identify trends and areas of growth. Solutions should be explored and reflected in NHS Board workforce plans.</td>
<td>Regional Workforce Directors, AHP Leaders, Workforce Planners, NHS Boards</td>
<td>2007</td>
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5. Summary of Recommendations – continued

### Demand

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<tr>
<td>AHP Leaders, Professional Managers</td>
<td>2008</td>
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<tr>
<td>Organisational Development Leads, NHS Boards, AHP Leaders/AHP Professional Managers</td>
<td>2007</td>
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<tr>
<td>AHP Leaders/AHP Professional Managers</td>
<td>2007</td>
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</table>
- AHP leaders and professional managers should work in a co-ordinated fashion to identify where AHP expertise can be used to best effect including anticipatory care and prevention.
- AHP leaders and professional managers should work together with Organisational Development leads to ensure that redesign training embedding patient focus and public involvement is routinely available for AHP leaders, managers and team leaders.
- AHP leaders and professional managers should introduce demand management systems in their services that are derived from process mapping and the patient journey.

### Capability

<table>
<thead>
<tr>
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<tr>
<td>NHS OD Leads, SEHD</td>
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<tr>
<td>AHP Leaders/AHP Professional Managers</td>
<td>2008</td>
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<tr>
<td>AHP Leaders/AHP Professional Managers, Regional Workforce Directors</td>
<td>2008</td>
</tr>
<tr>
<td>AHP Leaders/AHP Professional Managers, HR Managers, Workforce Planners</td>
<td>2007</td>
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</tbody>
</table>
- The SEHD and NHS systems should ensure that leadership training is made available to AHPs in professional, clinical leadership and management roles.
- AHP leaders and professional managers should introduce development opportunities for non-qualified staff, including training towards assistant practitioner levels.
- AHP leaders in partnership with regional workforce directors and workforce leads should embed consistent approaches to workload measurement and management within NHSScotland.
- AHP leaders and professional managers in partnership with local HR manager should ensure that succession planning approaches are in place to provide sustainable services and AHP workforce supply should be reflected in NHS Board workforce plans.

### Workforce Planning

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<tr>
<td>CHPO</td>
<td>October 2006</td>
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<tr>
<td>AHP Leaders, Regional Workforce Directors, NHS Boards</td>
<td>2008</td>
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</table>
- A national AHP steering group should be convened to support the implementation of the workload measurement and management recommendations.
- AHP leaders working in partnership with regional workforce directors and NHS Boards should introduce systematic and agreed methodologies to workload measurement and management.

### Quality and Outcomes

<table>
<thead>
<tr>
<th>By whom</th>
<th>By when</th>
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<tr>
<td>AHP Leaders and Professional Managers</td>
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<tr>
<td>AHP Leaders/AHP Professional Managers</td>
<td>2007</td>
</tr>
<tr>
<td>CHPO, AHP eHealth Leads, QIS, ISD CHPO, QIS, ISD, Lead NMAHP eHealth, AHP Leaders NHS Boards</td>
<td>2008</td>
</tr>
</tbody>
</table>
- AHP leaders and professional managers should ensure that national guidelines and standards of care are incorporated into workload management systems.
- AHP leaders should work to address lengthy waits for patients and service users across priority care groups, in particular children’s and diagnostic service in line with current and future targets for national waiting times.
- The SEHD in partnership with the AHP eHealth leads, NHS QIS and ISD should explore the feasibility of developing clinical quality indicators for AHP services evidenced from clinical datasets within the wider national context.
6. Action Checklist for AHP Leaders

☐ Have you critically reviewed the tasks currently being undertaken by qualified practitioners?

☐ Do they all add value to the patient journey or is clinical time being spent undertaking tasks that could and should be done by trained support staff?

☐ If your structure consists mainly of senior staff have you considered how you could introduce middle and junior posts as part of single system working, e.g. rotational posts?

☐ Do you know the current sickness/absence, maternity leave and turnover rates for your teams?

☐ Do you know the trends/variance over the last 3 years for these?

☐ Do you know the current organisational priorities likely to have a bearing on your service capacity to deliver?

☐ Have you considered pro-active recruitment strategies that include new graduates and allow for cover during periods of planned/unplanned leave?

☐ Does your service have flexible working arrangements in place?

☐ Are all your members of staff clear about the vision for your service linked to organisational priorities?

☐ Are your staff and clients clear about client entry and exit criteria of your service?

☐ Do you have a demand management system in place that takes account of and is supportive of patient needs and that is reviewed regularly?

☐ How do you involve service users in your service design and delivery?

☐ How is the clinical governance framework implemented within your service?

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West M A et al 2001 ‘The Effectiveness of Health Care Teams in the National health Service’
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http://www3.who.int/icf/icftemplate.cfm

Steering and Action Group Membership

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Marilyn Barrett, National Workforce Unit, SEHD
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Kathleen Henderson, Occupational Therapy Service Manager, NHS Borders
Nadia Northway, British and Irish Orthoptic Society
Allison Smith, Project Officer, SEHD
Karen Utting, Policy Officer Scotland, Society of Chiropodists and Podiatrists
Appendix 1

AHP Workload Project Aims and Methodology

Aims
- To establish which workload measurement and management systems are currently used by the Allied Health Professions in Scotland within the existing 17 Health Boards.
- To reach a consensus on which approaches should be used for workload management/measurement for AHPs.

Objectives
- Review of current methodologies used across the NHS in Scotland to measure AHP workload
- Identify where formal measurement systems were being used
- Identify examples of good practice in relation to Workload management/measurement across Scotland
- Identify key issues to inform the Workforce Planning agenda
- Identify issues relating to Workload management/measurement that need further action
- Identify a core components of a Workload Measurement toolkit applicable across the Allied Health Professions

Project Method
Appointment of Project Officer.
A multi-professional steering group was set up and a network for communication and liaison with Allied Health Professions across Scotland was established through the Chairs of the Allied Health Profession Advisory Committee in each Health Board Area. An action group was convened to lead and carry out additional focused pieces of work.

- Questionnaire
  A scoping questionnaire was developed and piloted in NHS Dumfries and Galloway.

- Consultation Events
  Three consultation events were held to capture qualitative information on related issues that were too complex to include in the scoping questionnaire.

- Focus Group
  A focus group was convened for the analysis and prioritization of the key themes emerging from the consultation events

- National Consensus Conference
  A national consensus conference was held to seek agreement on the key themes from the consultations and the scoping exercise.

Appendix 2

Common Workload Measurement Tools used by AHPS
Definitions adapted from – Keith Hurst (2002)
Nursing and Midwifery Workload and Workforce Planning Project (SEHD 2004)

Professional Judgement
This consultative approach uses professional experience to influence decision making, particularly to determine staff numbers needed to effectively serve a clinical area.

AHP per Occupied Bed
This relates to the average number of staff per occupied beds. This information is presented as a whole time equivalent figure (WTE) for example 0.86 WTE or 1.0 WTE.

Acuity/Quality Method
Also referred to as the dependency/activity/quality method, this approach includes collection of details on patient dependency, nursing workload and quality. Examples include Criteria for Care, Birmingham, East Dyfed (MDSX) and NISCM.

Timed Task/Activity Method
This approach uses care plans with associated timeframes or a detailed listing of the frequency and type of interventions to determine the required clinical and non clinical intervention and the required number of hours.

Regression-based Systems
The regression method is a system where one variable – the independent variable – is used to predict another variable – the dependent variable. For example, studies undertaken using this approach have used bed occupancy levels as examples of independent variables to predict the required number of staff – dependent variable.

The method employs advanced statistical analysis systems to determine the relationship between the independent and dependent variables.

National Recommendations
National and Professional Bodies recommendations on notional caseload or formula for calculating staff required per session. For example the CSP Musculoskeletal Tool.

Based on Historical Budgets
Establishment based purely on available budgets.
CIRIS
Electronic governance method developed with the Society of Radiographers.

Caseload Profiling Tool
Patient characteristics are recorded and set against given criteria and the information is used to determine staffing requirements.

One example of a measure that may be used in caseload profiling is the Vulnerability Score used by Health Visitors.

Workload Analysis Tool
Reviews and records a number of aspects of workload, including the time involved in caring for patients with specific needs, group activities, travel time, record keeping, and professional practice development. The information is then used to determine the number of staff required to provide care for a specific area or group of patients. E.g. Joyce Williams’s method; Wiseman Workload Measure.

Predictive Tool
This involves using statistics presently available through ISD and other sources to predict caseload activity at different times of the week/month or year. An example of this is when acute admissions are at their greatest number, or when admissions to A+E at a peak.

Monthly Statistics
Used to review and plan based on existing departmental activity levels.

Appendix 3
Tools used by AHPs in Scotland
The main focus of the scoping survey was to identify the tools that the Allied Health Professions are currently using in NHSScotland. And Figure 1 charts the findings.

Professional Judgement
A decision-making approach widely used by AHP managers in relation to workload management. Knowledge of the activity, staff resource and familiarity with competencies linked to staff grade were reported as being key components of the decision-making process, underpinned by knowledge of available skill mix within their teams, the total resource available including associated risk assessment. It was recognized that decisions needed to be underpinned by objective evidence and data.
Monthly Statistics
This method also was considered useful as it is embedded in routine practice. Its limitations are recognised as clinical activity and quality measures are not inherent in the current methodology. The retrospective data that it does provide was not widely used, e.g. peak demand times as a predictive tool for managing demand or planning and service development.

Historical Budgets
This approach to managing service establishment and activity was identified as a method of driving activity but curtailing quality improvement, staff development and service redesign all of which are needed to respond to the changing health needs of the population and in turn, the service.

Professional Body Recommendations
These recommendations included National Professional and Special Interest Group Guidelines as well as specific workload analysis tools designed or commissioned by professional bodies. For example:

- ‘Recommendations for calculating physiotherapy staffing for GP referred musculoskeletal outpatient services’ from the Chartered Society of Physiotherapy,
- ‘The Workload Management Tool Kit; A Professional Development Guidance Document’, from the British Dietetic Association,
- Evidence-based guidelines and standards that are both condition and profession specific.

Professional body guidelines and tools were the most widely used throughout all the professional groups and were used as methods of managing demand, providing qualitative outcomes, analysing activity and relating this to capacity and productivity.

Population-based System
Fewer than 50% of respondents incorporated population information into their measurement methods. Given the national trends in the demographic distribution of the population, the age of the NHS workforce, geographic challenges in some of the more remote and rural areas this needs to factored into a management and measurement system in order to inform planning.