

A Conceptual Framework for Performance Assessment in Primary Health Care

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As health systems strive to achieve improvements in quality, equity and efficiency, systems of performance assessment are increasingly being introduced. To function effectively as tools for internal quality improvement, they need to be aligned with staff and organisational objectives, foster insight into practice and provide a focus for learning leading to improvement. Adopting such a “coalface” perspective, we developed a conceptual framework to underpin the potential development of a quality system for a large primary health care program. The Framework for Performance Assessment in Primary Health Care (FPA_PHC) is grounded in evaluation theory and explicitly identifies the processes of primary health care articulated by the World Health Organization (WHO). It is based on Donabedian’s (1998) now classic “structure”, “process”, “outcome” model for assessment of quality of care. The FPA_PHC specifies the development of objectives that are focused on patients/families/communities and has four indicator levels relating to stewardship, organisational structures and processes, processes of care and intermediate outcomes. Equity can be assessed by asking of processes of care and intermediate outcomes: “is it the same for everyone?” The indicators can be mapped to higher order system performance frameworks such as the National Health Performance Framework. The FPA_PHC has been adopted for the National Quality and Performance System for Divisions of General Practice and its application in this and a second setting are described.

Key words: Primary health care, Performance assessment, Performance indicators, Quality assurance, Quality improvement

As health systems strive to achieve improvements in quality, equity and efficiency, systems of performance assessment are being increasingly introduced. They have two principal uses: external accountability and internal quality improvement (Freeman, 2002). There is considerable ambiguity about the capacity of such systems to meet these dual requirements and evidence to date of their effectiveness in improving the quality and outcomes of care is scant (Marshall, Shekelle, Leatherman, & Brook, 2000). There is also uncertainty about the capacity of existing data sources to provide an information base that will allow for attribution of outcomes in ways that can inform the development of program activity (Mullen, 2004). As a result, a number of authors have argued in favour of a focus on internal continuous quality improvement approaches (Freeman; Marshall et al.). To function effectively as the latter, it has been argued that systems need to be aligned with staff and organisational objectives, foster insight into practice, and provide a focus for learning leading to improvement (Freeman). In practical terms, this means they must make sense to providers at the “coalface”.

We were asked to consider an appropriate approach to performance assessment for a large Australian Government program that funds comprehensive primary health care services and takes a quality improvement approach. Adopting a coalface perspective, we developed a conceptual framework to underpin the development of indicators for this program. We describe the framework and its subsequent application in two settings.

Overview of the framework

Our Framework for Performance Assessment in Primary Health Care (FPA_PHC) is grounded in evaluation theory and explicitly identifies the processes of primary health care articulated in the World Health Organization’s [WHO] Declaration of Alma Ata (WHO, 1978) and recent review Primary Health Care: A Framework for Future Strategic Directions (WHO, 2003).

It is based on Donabedian’s (1988) now classic “structure”, “process”, “outcome” model for assessment of quality of care. This model has also been adapted by others (Campbell, Roland, & Buetow, 2000) and is in keeping with the approach

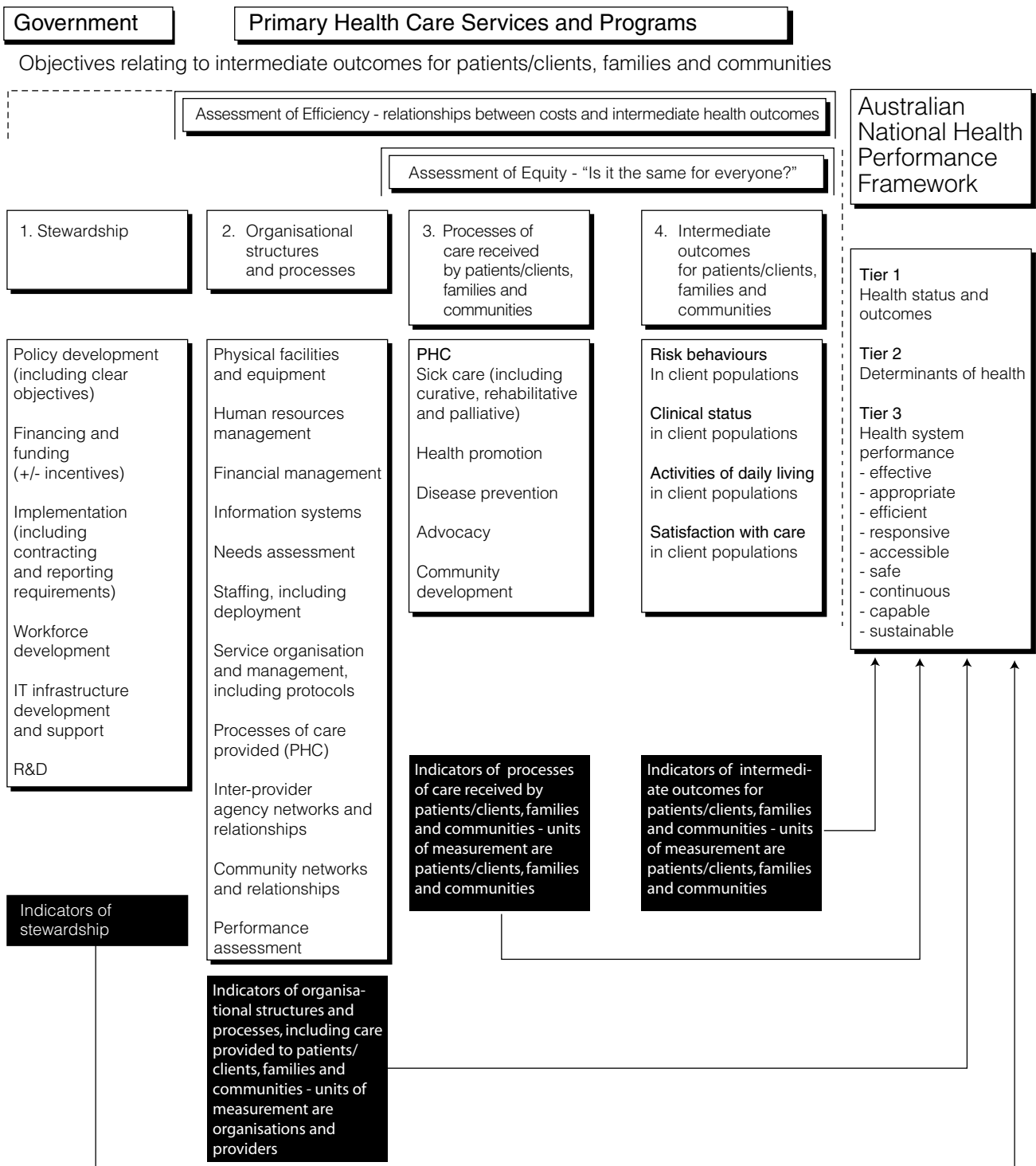
recommended by the World Bank (World Bank, 1993). Donabedian’s model is in turn based on robust theory underpinning program evaluation more generally (Rossi & Freeman, 1993).

FPA_PHC is objectives-based; that is, it recognises that performance must be measured against defined objectives. It specifies that the primary objectives of the primary health care system as a whole, and of the programs and services within

it, relate to consumers (patients/clients, families and communities), rather than to policy-makers, programs or providers.

The framework is described below. It is intended to be a practical and useful tool. It has undergone considerable refinement and been used in two contexts since it was first developed; a number of previous versions are in local circulation. This is the fifth version (FPA_PHC_v5), shown in Figure 1. It has four levels:

Figure 1: Framework for Performance Assessment In Primary Health Care – Fpa_phc_v5



- Stewardship
- Organisational Structures and Processes
- Processes of Care
- Intermediate Outcomes.

Within FPA_PHC_v5, objectives relate to the intermediate health outcomes for consumers that the services or programs are trying to achieve. Performance against the objectives can be assessed either qualitatively or quantitatively using indicators at one or more levels.

Stewardship

This identifies the functions governments must perform in order for primary health care services and programs to be implemented. These include the development of policies with clear objectives, financing and funding arrangements, contracting (including reporting requirements), workforce development, IT infrastructure development and support and research and development.

Organisational structures and processes

These equate to Donabedian’s “structure” (see Table 1), or “the attributes of material resources ... human resources and ... organizational structure” (Donabedian, 1988; p1745). Structures and processes that a primary health care provider would need to establish, implement and maintain are identified. These include physical facilities and equipment; staffing, including deployment; staff training and development; human resources management; service organisation and management, including development and use of protocols; financial management; information systems; needs assessment; performance assessment; inter-provider agency networks and relationships; and community networks and relationships.

Table 1: FPA_PHC_v5 Mapped to Donabedian’s Model for Assessment of Quality of Care

FPA_PHC_V5	Donabedian’s Framework
Stewardship	Not specified
Organisational Structures and Processes	‘Structure’
Processes of Care for Patients/Clients, Families and Communities	‘Process’
Intermediate Outcomes for Patients/Clients, Families and Communities	‘Outcome’

Processes of care

These equate to Donabedian’s “processes”, but they are confined within this framework to the actions taken by providers and patients/clients, families and communities in care processes. These are derived from the WHO’s Declaration of Alma Ata and subsequent review of primary health care (WHO, 1978, 2003) and the related policy literature (Australian Health Ministers Advisory Council, 1998 [as cited in Fry & Furler, 2000]; Ministry of Health 2001; Department of Health and Children, 2001). They are:

- health promotion
- illness prevention
- sick care
- advocacy
- community development.

Processes of care are usefully distinguished from organisational processes, rather than being combined with them as in Donabedian’s framework, because it is very easy for providers to focus their performance assessment on their organisational processes rather than on patient care and what that is trying to achieve. At the same time, there are many important organisational processes worthy of identification and monitoring that do not involve direct patient care. This framework makes clear that these need to be separately addressed. Processes of care equate to “outputs” under input-output-outcome frameworks. We would argue, however, that health care providers relate more readily to the notion of care than to output. Further, outputs can (and frequently do) become organisational outputs other than direct patient/client care, thus losing the client focus that the FPA_PHC_v5 attempts to help maintain.

Intermediate outcomes

The limitations of what the health system can do for health mean that health system performance assessment “should relate to those aspects of care which can be altered by [those] whose performance is being measured” (Giuffrida, Gravelle & Roland, 1999, p. 94). “Therefore, for performance purposes, health outcomes can be narrowly defined as those changes in health status [that are] strictly attributable to the activities of health systems” (Hurst, 2001, p. 5). The two principal domains of outcomes are health status and user evaluation (Crampton et al.,

2004). It is recognised that primary health can only be held accountable for intermediate health status outcomes (Van Norren, Boerma, & Sempebwa, 1989). Earlier versions of the framework identified health risk behaviours, clinical status and patient/client satisfaction. To these have been added activities of daily living, which, we found, health service managers caring for patients/clients with long-term disabling conditions were frequently concerned about and were often monitoring as part of their overall assessment of patient/client outcomes. Improvements in the ease of daily living can occur as a result of primary health care interventions with or without changes in risk behaviours or clinical status. Thus, intermediate outcomes within PA_PHC_v5 relate to:

- health risk behaviours (smoking, exercise, nutrition)
- clinical status (blood pressure, HbA1c levels)
- activities of daily living
- client satisfaction.

Measures

There will be a mix of qualitative and quantitative measures. Targets can be established for measures that are quantifiable. In keeping with the consumer focus, the unit of measurement at Level 3 is patients/clients, families or communities, not providers. The distinction is readily illustrated with care planning in the management of chronic disease. Within the framework, a valid Level 3 measure would be the proportions of patients/clients who had a care plan, not the average number of care plans completed per provider—the latter belongs at Level 2, along with other measures relating to training, deployment, use of care protocols and provision of care processes etc. The unit of measurement at Level 4 is again patients/clients, families or communities, with valid measures relating to the intermediate outcomes defined above.

Quality, equity and efficiency

Consumers, providers and governments are interested in the quality, equity and efficiency of their primary health care services and programs. These are overarching goals for health care systems. How are they addressed in this framework?

Quality: FPA_PHC is a framework that allows the monitoring of achievement, across the

primary health care system, of specified targets for consumers. It is thus a quality framework.

Efficiency: “Efficiency measures whether healthcare resources are being used to get the best value for money. ... [It] is concerned with the relation between resource inputs ... and either intermediate outputs ... or final health outcomes...” (Palmer & Torgerson, 1999). Efficiency is specified within FPA_PHC_v5 as an assessment of the relationships between costs of organisational structures and processes, processes of care, and intermediate outcomes. The efficiency of stewardship functions could also be assessed.

Equity: Within FPA_PHC_v5, equity can be assessed following the approach used in the Australian National Health Performance Framework by asking of processes of care and intermediate outcomes: “is it the same for everyone?”

Mapping to National Health Performance Frameworks

Performance assessment in primary health care is often operating in the context of wider health performance frameworks such as those being used in Australia (National Health Performance Committee, 2001) and Canada (Canadian Institute for Health Information, 2006). These frameworks encompass “health status and outcomes”, “determinants of health” and “health system performance”, of which primary health care is but a part. They are not objectives-based, however, so they cannot be readily adapted to an objectives-based approach to performance assessment for services and programs. In order to contribute to broader health performance reporting, FPA_PHC_v5 measures can be mapped to these frameworks.

Practical application

The framework has now been used in two Australian settings. The first is for the National Quality and Performance System (NQPS) for Divisions of General Practice. The second is for the Key Performance Indicators for Community Health in the Australian Capital Territory. In these two jurisdictions we have led multi-faceted, consultative processes to populate the framework with indicators for a wide spectrum of primary health care activity, from governance to service integration to the management of chronic conditions (summarised in Table 2). This has demonstrated that the framework

Table 2: Summary of Primary Health Care Indicator Domains in two Australian Jurisdictions using the FPA PHC v5

National Performance Indicators for Divisions of General Practice		Key Performance Indicators for ACT Community Health	
Priority Area	Domain	Program	Domain
Governance	Performance improvement culture Effective external engagement Financial, compliance and risk management	Acute Support	Diabetes
		Continuing Care	Falls prevention
		Children, Youth and Women's Health	Pain management
		Alcohol and Drug Dental Health	Wounds Nutrition
Prevention and Early Intervention	Immunisation		Child protection, education and training
Access	Residential Aged Care		Parenting enhancement Tertiary care
Integration	GPs and hospitals		Adult and child and youth services; health promotion
Chronic disease	Diabetes		
	Mental health		
	Asthma		

makes sense to providers at different levels and in different settings. We use the NQPS to illustrate the application of the framework.

Divisions of General Practice are geographically defined local networks of general practitioners (GPs) that were established by the Australian Government in 1992. There are 120 Divisions across the country and 94% of GPs are members. Their chief mission has been to “support and assist general practices to improve the quality of health service delivery at a local level, and to provide services to the community in a primary health care system, collaborating with other health professionals to achieve those ends” (Primary Health Care Research and Information Service, 2006, p. 6).

The NQPS, introduced in 2005, was the first attempt to implement a system of national monitoring of quality for Divisions. It aims to address a number of problems identified in a major review of their role (Phillips, 2003). These included a lack of clarity about government expectations of performance, variability in performance across the network and a lack of capacity in the program to demonstrate achievements and value for money.

The philosophy underpinning the NQPS is expressly quality improvement, but it aims to achieve a mix of external accountability and internal quality improvement. It covers governance and six other domains in four priority areas identified in the government's response to the Divisions review (Australian Government Department of Health and Ageing, 2004). It is thought to provide “a framework to consider performance against ... expectations” that is hoped will deliver “a greater

ability to demonstrate benefits of the Divisions network” (Australian Government Department of Health and Ageing, 2004, pp. 2-9).

The complete set of indicators for the NQPS is available online (Australian Government Department of Health and Ageing, 2005) and illustrated in Figure 2. As can be seen, the FPA_PHC_v5 has been adapted to include two levels that focus on “organisational structures and processes”—one for Divisions and one for the general practices they support. The stewardship level covering the responsibilities of government was not included (ACT Community Health retained the stewardship level, and also had two levels for organisational structures and processes: one for Community Health and one for different program areas within Community Health). The objective and indicators shown are in the diabetes domain of the chronic disease priority area. Within this domain, equity has been addressed by disaggregation of the Level 4 indicators by Aboriginal and Torres Strait Islander origin. There is a related indicator at Level 1 pertaining to Division support for general practices to improve capture of Indigenous origin in patient records, which is a major national priority in Aboriginal and Torres Strait Islander health.

With the exception of the governance domain in the NPIs, which had indicators at Level 1 only, every effort was made to establish indicators at Level 3 (processes of care for patients/clients, families and communities) and Level 4 (intermediate outcomes patients/clients, families and communities) to help ensure an appropriate patient/client focus. This was not, however, seen as a requirement. The main barriers were limitations in attribution, evidence base and/or data sources. It is anticipated that,

Figure 2: Future Directions. National Performance Indicators for Divisions of General Practice, November 2005

National Priority Area: Managing Chronic Disease
Domain: Diabetes
Objective: Division will support general practices/GPs to provide optimal care and contribute to the achievement of the best possible health outcomes for patients with diabetes.
Rationale: Sustained improvements in health outcomes for people with chronic diseases such as diabetes have been associated with a more systematic approach in general practice including intensive follow up, use of clinical management guidelines integrated with self-management support programs and more effective use of nurse case managers and non-physician care providers. Systematic care includes having a disease register, regular recall and review, protected time, a practice nurse, clear written guidelines and a system for auditing standards of care. Supporting chronic disease care is a core role of Divisions.

Level 1 Divisions (Organisational Structures/ Processes—Programs)	Level 2 General Practices/GPs (Organisational Structures/ Processes—Programs)	Level 3 Process of Care for Patients, Families, Communities	Level 4 Intermediate Outcomes for Patients, Families, Communities
<p>N_DIA 1.1 Division collaborates with other organisations, service providers and consumer/carer groups to facilitate patient access to optimal diabetes care. <i>2 points (compulsory)</i></p> <p>N_DIA 1.2 Division takes a systematic approach to support general practices/GPs to provide optimal diabetes care. <i>2 points (compulsory)</i></p> <p>N_DIA 1.3 Division facilitates access to effective Continuing Professional Development (CPD) for diabetes care. <i>2 points</i></p> <p>N_DIA 1.4 Number and proportion of GPs from whom the Division is receiving electronic patient records to provide feedback for quality improvement in diabetes care. <i>20 points</i> <i>plus bonus points from 2006-07</i> <i>>20% of practices = 05 points</i> <i>>40% of practices = 10 points</i> <i>>50% of practices = 15 points</i> <i>>60% of practices = 20 points</i></p> <p>N_DIA 1.5 Division takes a systematic approach to support general practices/GPs to consistently capture and record Aboriginal and/or Torres Strait Islander origin for patients with diabetes on the practice register/reminder system. <i>2 points (compulsory)</i></p>	<p>N_DIA 12.1 Number and proportion of general practices using a practice register/recall/reminder system to identify patients with diabetes for review and appropriate action. <i>4 points (compulsory)</i> <i>plus bonus points from 2006-07</i> <i>>xx% of practices = 2 points</i> <i>>xx% of practices = 4 points</i></p>	<p>N_DIA 3.1 Number of service incentive payments (SIPs) made to GPs practising in the Division's area compared to the estimated population in the Division's area with diabetes. <i>8 points (compulsory)</i> <i>plus bonus points from 2006-07</i> <i>>xx% = 4 points</i> <i>>xx% = 8 points</i></p>	<p>N_DIA 4.1 Number and proportion of patients with diabetes on practice register/recall/reminder systems whose most recent HbA1c in the past 12 months was: <ul style="list-style-type: none"> • 7.0% or less • more than 7% but less than 10.0% • 10.0% or more • not measured. <i>20 points</i> <i>plus bonus points from 2006-07</i> <i>xx = 10 points</i> <i>xx = 20 points</i></p> <p>N_DIA 4.2 Number and proportion of patients with diabetes on practice register/recall/reminder systems whose most recent total cholesterol in the past 12 months was: <ul style="list-style-type: none"> • less than 4mmol/L • 4.0mmol/L or more • not measured. <i>20 points</i> <i>plus bonus points from 2006-07</i> <i>xx = 10 points</i> <i>xx = 20 points</i></p>

(Australian Government Department of Health and Ageing, 2005)

over time, expansion of the evidence base and particularly improved information systems will allow greater emphasis on Level 4 indicators in both systems. However, we have argued that in order to manage reporting burden, the indicators at Level 4 should be limited in number, providing a litmus test only of quality of care rather than a comprehensive coverage of desired outcomes. On the other hand, there will be domains for which indicators at Level 4 will never be appropriate; for example, it is unlikely

that the effectiveness of GP-hospital integration could be directly measured in terms of health outcomes for patient/client population groups.

Finally, though this is not an attribute of the framework per se, it is important to note that its broad support within the Division setting was in part enabled by provision in the technical details and online reporting template for the capture of explanatory text for the quantitative indicators. This was done to address Division concerns about the

potential for invidious comparisons that failed to take account of local circumstances, which is particularly germane to the Australian context where geographic and social conditions vary enormously across the continent. Freeman (2002) has highlighted the importance of “soft” data to aid in interpretation.

Conclusion

The FPA_PHC_v5 has a number of attributes. First, it is grounded in theory and incorporates the elements of primary health care recognised by the WHO. Second, it is objectives-based and provides a conceptually and visually coherent framework within which performance indicators can be developed and implemented. The relationships between the levels allow for an overall assessment of whether underpinning organisational structures and processes, and processes of care necessary to achieve desired outcomes, are being monitored and are effective. This implies and reinforces a systematic approach to care that has made sense to providers in different primary health care settings and is consistent with a quality improvement approach to performance assessment. Third, it has an explicit focus on patients/clients, families and communities. This counteracts the ease with which it is possible for provider agencies to focus on their staff rather than their clients. And finally, it makes explicit consideration of equity in care received and intermediate health outcomes for patients/clients, families and communities, through application of the question: “is it the same for everyone”, resulting in disaggregation of Level 3 and Level 4 data using relevant ethnic and other social criteria. As a framework for measuring performance, the approach to linking client, family and community outcomes with processes of care in a program-specific context, appears to be unique.

The framework is complementary to, but distinct from, accreditation frameworks such as those produced by AGPAL, EQuIP and the Quality Improvement Council in that they are designed

to assess the quality of organisational structures and processes but do not attempt to link these to the care of particular client groups, nor to the quality of clinical care or client outcomes, using client measures. The complementarity of the two systems is embedded within the NQPS—Divisions are required to obtain accreditation through a recognised provider within their current contract period. Once obtained, they will have greatly reduced reporting requirements within the governance domain of the NPIs.

In recent years, a comprehensive general practice performance monitoring system has been introduced in the United Kingdom. While it has process and outcome indicators in core areas, these are not fitted to an underlying conceptual framework against which the FPA_PHC can be compared.

As with any monitoring system, important questions must be asked about the validity of the measures, how well they have been taken up and what the measurement constraints and organisational costs and benefits have been. These and other questions are the subject of an evaluation of the NPIs that includes analysis of the first year’s data that has been commissioned by the Department of Health and Ageing and is being undertaken in the first half of 2007.

Also important is the question of how effective the system will be for improving quality. An examination of this question in the context of the international literature on accountability versus continuous quality improvement approaches to performance is the subject of a separate paper. A great deal will depend on the extent to which the data are useful at local and national levels, and what action is taken at both levels as a result of the information obtained. The extent to which the framework can provide a basis for the development of national- or state-based pictures of performance as well as a tool for program improvement at the individual agency level, will determine its success as a performance framework with dual functions related to meeting imperatives for accountability and quality improvement.

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