



Rapid Response Brief

Accountability Mechanisms for Performance Improvement of Regional Health Authorities in Trinidad and Tobago

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RAPID RESPONSE BRIEF

**Accountability Mechanisms for Performance Improvement of
Regional Health Authorities in Trinidad and Tobago**

30-Day Response

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The Caribbean Centre for Health Systems Research and Development (CCHSRD) is a Research Centre at The University of the West Indies, St. Augustine. The Centre was established to pursue a program of work in Health Policy and Systems Research (HPSR) to address pressing policy and system issues faced by decision-makers in the Caribbean.

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Conflict of Interest

The authors declare there is no actual or potential conflict of interest in relation to this brief.

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Acronyms

CCG:	Clinical Commissioning Group
CIHI:	Canadian Institute for Health Information
ERHA:	Eastern Regional Health Authority
MOH:	Ministry of Health
NCRHA:	North Central Regional Health Authority
NWRHA:	North West Regional Health Authority
PM:	Performance Management
RHA:	Regional Health Authorities
TRHA:	Tobago Regional Health Authority
NHS OF:	National Health Service Outcomes Framework

Key Messages

Question

- What type of accountability mechanisms can be used to achieve performance improvement of Regional Health Authorities (RHAs) in Trinidad and Tobago?

*Accountability is the obligation to provide information and justification for decisions and actions, along with the imposition of incentives or sanctions to ensure compliance. The Trinidad and Tobago Ministry of Health (MoH)'s request for accountability mechanisms was interpreted as a request for a workable **performance management (PM) system**. That is, tools, processes, incentives, or sanctions that could be used to influence performance in the RHAs in Trinidad and Tobago. PM enables an organization to articulate its business strategy, align all activities to this strategy, identify key performance indicators and track progress, which can be used by decision-makers and different actors.*

Synthesis of evidence found

- There is a wide variation in the type of PM frameworks used by health care provider organizations internationally. The most used was the Balanced Scorecard, however, there is no evidence to support a single model as most effective.
- There is no consensus about the performance domains that should be measured by health care organizations, however, four main categories were identified: management practice; service provision; learning and innovation; and health outcome.
- Key steps in developing a PM system are strategy formulation; selecting performance measures that are linked to strategic goals; identifying sources of information; undertaking performance measurement; and reporting of results.
- Performance measurement alone is not expected to result in improvements in performance. A system of incentives must also be used to ensure the RHAs' activities are aligned with strategic goals. Incentives need to be carefully selected as they can have unintended consequences. The four main types of incentives used in health care provider organizations were: public disclosure of performance information; external inspections; strategic purchasing or pay-for-performance; and clinical governance.
- The evidence relating to incentives structures is mixed. There is moderate evidence that disclosing data about hospital quality to the public can encourage quality improvement activities at those institutions. However, the effect at the individual provider level is unclear. The evidence for use of external inspections to improve compliance with policies and standards is also mixed. Clinical governance systems, including education and training of providers, audits and feedback tools and performance indicators and clinical standards are effective for improving quality of care and patient safety in health care organizations. The effect of financially rewarding providers for achieving performance benchmarks, or direct payments to service providers to undertake quality improvements was shown to be highly

dependent on the design of the scheme and the context in which it is implemented. While several benefits of pay-for-performance programs were identified including improved process of care and decreased inequalities, overall health care expenditures and lengths of stay, there are also potential harms associated with pay for performance including neglect of un-incentivized aspects and upsurge of gaming behaviours comprising up-coding and manipulating data. Several strategies were identified to overcome potential barriers to pay for performance programs including the use of a combination of process and outcome indicators, regular involvement of stakeholders throughout different stages, selection of targets based on baseline room for improvement and use of absolute targets, and use of positive rather than competitive incentives.

Implementation Considerations

- In developing a consolidated PM scorecard system, the MoH would have to map various perspectives that reflect a multidimensional view of RHAs performance. One approach, used by not-for-profit health care organizations, is to place the financial imperative at the foundation of the strategy, followed by learning and growth, internal processes (business and clinical management) and ultimately health outcomes.
- In selecting incentives, the MoH should consider how existing initiatives such as the Annual Service Agreement and the Quality Awards system could be integrated into the new measurement framework.
- Dialogue and collaboration between the MoH and the RHAs are critical for development of a workable system that could meet the needs of both parties.
- Capacity to implement and sustain the use of the PM system, including the capability to analyse the volume of data that it would generate should be a key consideration in determining the complexity of its design.

Question

What type of accountability mechanisms can be used to achieve performance improvement of Regional Health Authorities (RHAs) in Trinidad and Tobago?

1. Why is this issue important?

Regional Health Authorities (RHAs) are autonomous bodies in Trinidad and Tobago that own and operate health facilities in defined geographical areas through the country. RHAs are responsible for delivering health care services to the catchment populations within their Regions. There are five RHAs: The Eastern Regional Health Authority (ERHA); the North Central Regional Health Authority (NCRHA), the North West Regional Health Authority (NWRHA), the South West Regional Health Authority (SWRHA) and the Tobago Regional Health Authority (TRHA).

With the formation of the RHAs, Trinidad and Tobago's public health care system became decentralized, and now operates upon the principle of a purchaser-provider split. The Ministry of Health (MoH) in the role of purchaser, makes annual budget allocations to the RHAs, who utilize these resources to deliver health care services. A principal-agent relationship therefore exists, in which the MoH is the principal and the RHAs function as its agents. Where such relationships exist, the need for governance and oversight becomes important. Approximately 83% of the annual recurrent budget allocated to the MoH, is disbursed to the RHAs to support their operations (1). Thus, ensuring efficient use of these resources, delivery of quality care, citizen satisfaction and overall confidence in the health care system are paramount.

Several measures for holding the RHAs accountable are currently in place. These include the obligation for them to submit Annual Reports to the Minister of Health; to appear before Public Accounts, Joint Select and other Standing Committees of the Parliament; and to hold, once

Background to the Rapid Response Brief

CCHSRD's Rapid Response Briefs are prepared in response to urgent requests for research evidence from policymakers and other stakeholders in Trinidad and Tobago. This brief was prepared in response to a question from the Ministry of Health, Trinidad and Tobago.

Rapid Response Briefs summarize what is known about the question, from research evidence drawn from systematic reviews and from single research studies. A systematic review is a summary of research studies addressing a clearly formulated question. Systematic reviews use explicit methods to identify, select, appraise, and synthesize the findings from research papers.

This brief was prepared in a 30-day timeframe and involved the following steps:

- 1) Clarifying the question with the service-user.
- 2) Formulating a clear review question and confirming it with the service-user.
- 3) Identifying, selecting, appraising and synthesizing relevant research evidence about the question.
- 4) Drafting the brief in such a way that the research evidence is presented in clear and concise language.
- 5) Finalizing the brief based on the input of peer/merit review.

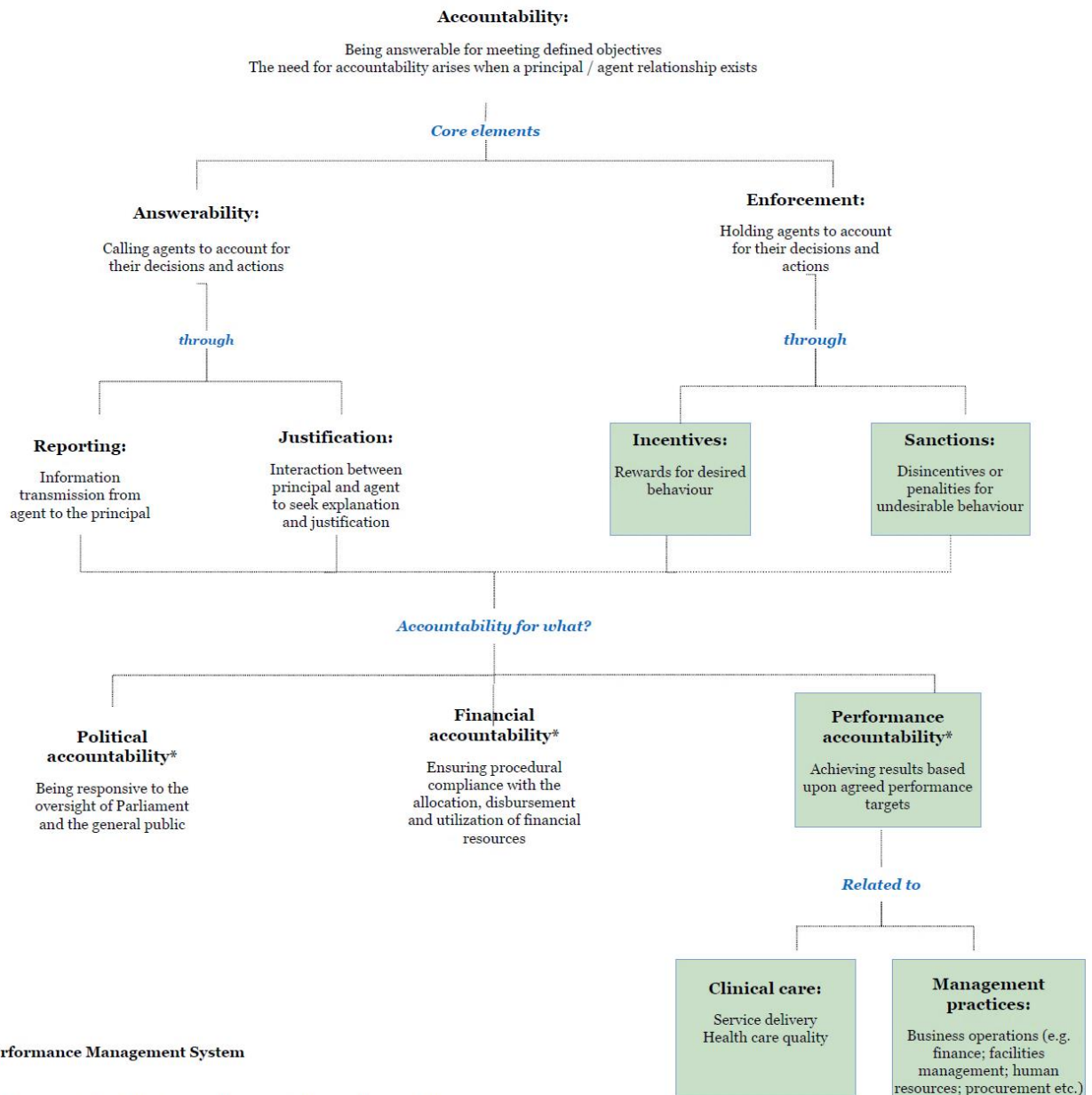
per year, a Board meeting that is open to the general public. In addition, regular meetings with MoH officials are held, and bipartite discussions and reporting on issues such as information technology, human resources and pharmaceutical procurement are routinely conducted. The Annual Service Agreement is also a soft contract between the two parties, which links the provision of resources to expected results (2). Evidence suggests, however, that organisations that do not pay close attention to performance management, experience lower than expected improvements and a higher level of customer dissatisfaction (3). As a result, the MoH is seeking to identify a consolidated accountability mechanism that could be used to monitor and drive performance improvement across the RHAs.

Accountability is defined as the obligation to provide information and justification for decisions and actions, along with the imposition, by those charged with oversight, of incentives or sanctions to ensure compliance with desired behaviour (4). RHAs have three type of accountability relationships—political, financial and performance (4,5). Politically, they are accountable to the people of Trinidad and Tobago via the Parliament. As public sector agencies, they must ensure compliance with the financial rules and regulations governing public institutions. Thirdly, as health care provider organizations, they are directly accountable to their principal, the MoH, for their performance (6), which covers two domains: clinical care and management practice related to the Health Authority (7). A concept map in Figure 1 defines these accountability elements and illustrates how they relate to performance. ***Informed by this illustration, we interpret the MoH's request for accountability mechanisms, as a request for a workable performance management (PM) system that is, tools, processes, incentives or sanctions, that could be used to facilitate improved performance in the RHAs, across both clinical and managerial domains (areas shaded green in Figure 1) (8,9).***

The purpose of this rapid response brief, therefore, is to present the best available evidence on accountability mechanisms which can be used to improve performance across the RHAs in Trinidad and Tobago.

PM enables an organization to articulate its business strategy, align all activities to this strategy, identify key performance indicators, and track progress, which can be shared with decision-makers. In Figure 2, the inter-relationship between key concepts is clarified. A key distinction should be made between performance improvement and organization transformation. While organization transformation refers to planned change to improve performance, it is an intervention at a higher level, as it requires performance improvement as well as changes in organizational culture (10). Other key terms that will be used throughout this document is provided in Appendix 1.

Figure 1
 Defining elements of accountability and performance management in health

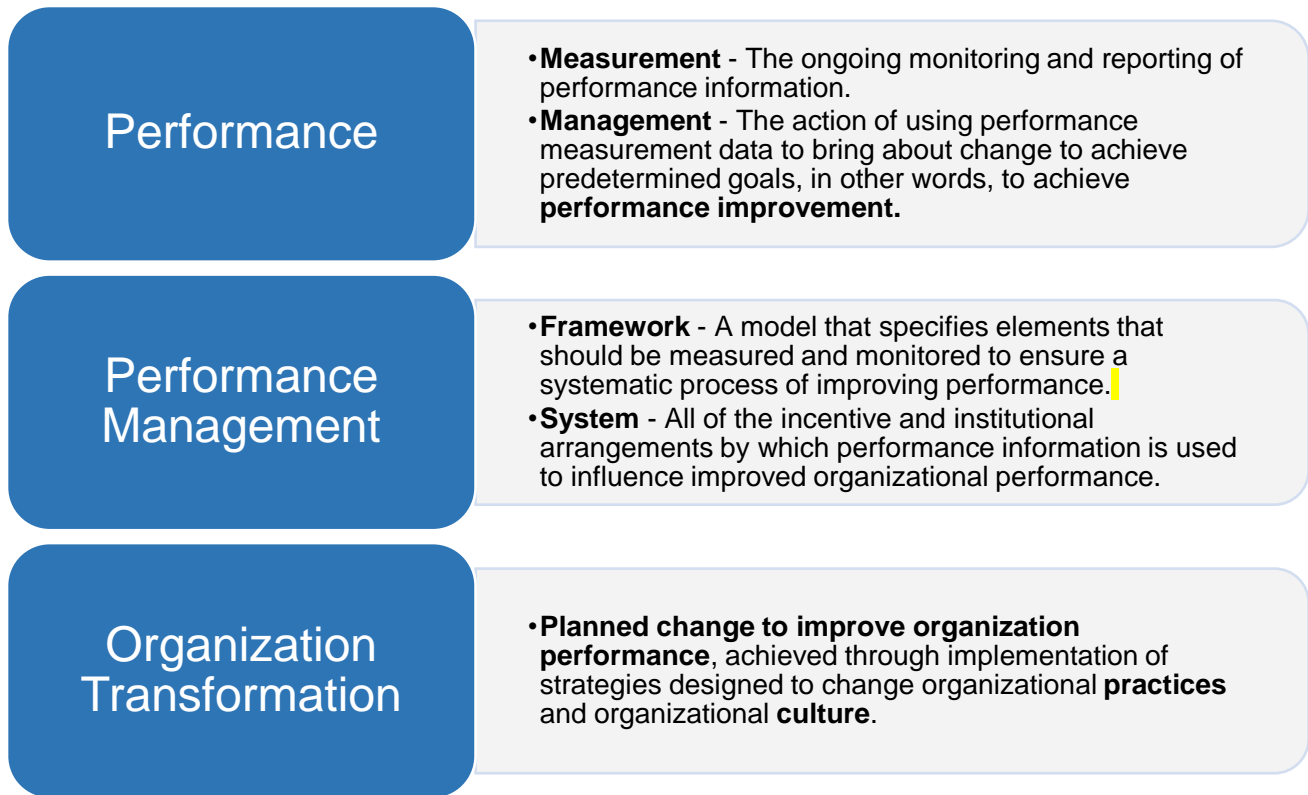


Performance Management System

* The three accountability categories are not mutually exclusive as there are significant overlap among them
 Created by author from study data

Source: Author's illustration based on study data (4–6)

Figure 2 – Concept clarification: performance measurement, management, improvement, and organization transformation



Source: (9,11–13)

What we found – Best available evidence

We searched PubMed and Health Systems Evidence databases in May 2020 using variations of the term performance management (e.g. performance evaluation; performance accountability; performance measure*; performance improvement). We identified 20 relevant systematic reviews and 2 evidence synthesis products, addressing the following domains:

1. Performance Management frameworks and systems (n=8) (3,9,11–14,19,20);
2. Organization Transformation approaches (n=3) (10,17,21);
3. Individual performance improvement interventions used in health care organizations (n=9) (15,16,18,22–27).

The research findings under each domain are summarized below. A detailed overview of the findings from systematic reviews (including quality appraisal and countries of included studies) is provided in Appendix 2.

1. Performance Management Frameworks and Systems

There is no standard PM framework or system for use by health authorities or health care organizations globally. The evidence showed that over 100 frameworks are used across public health, non-profit and private sector health organizations in both developed and developing countries (13). PM can be applied at different levels, settings, programs, and population groups, supported by the use of different types of frameworks. For example, the Canadian Institute for Health Information Health Indicator Framework; the Institute of Medicine Matrix; and the National Health Service Performance Framework; have been used in some countries at the national or sub-national level, while alternative frameworks have been used for primary health care, emergency services, surgical care settings; or for special programs such as disability (12,13).

Many of the frameworks used were hybrid, incorporating concepts and measures from several different models, and included approaches from non-health disciplines (12–14,20). **The Balanced Score Card (BSC), or adaptations of this model was the framework most commonly used by health care provider organizations (12,13). No evidence is currently available about the relative effectiveness of one type of PM system versus another.**

Despite the heterogeneity among frameworks, there is a significant degree of similarity in the areas included for performance measurement. Four main categories were identified: management practice; service provision; learning and innovation; and overall outcome achievement. Under management practice, performance indicators tended to focus on leadership and governance, and measures related to the business process, including finance, cost, and facilities. Performance measurement within the service provision domain focussed largely on client centeredness and customer satisfaction. The learning and innovation domain addressed health care quality and safety issues, and the outcome category focussed on measuring the achievements of health services or the health system, with indicators pertaining to availability, accessibility and fairness (9,11–14,19).

The approach towards implementing PM systems was also quite similar. Content analysis from the systematic reviews showed implementation as an ongoing cyclical process involving six stages: i) prioritising areas for attention; ii) setting goals for performance measurement; iii) selecting performance measures linked to overall strategic goals; iv) identifying types and sources of information; v) undertaking performance measurement; vi) reporting of results (3,9,11,14,19).

The rationale for the design and application of PM systems was found to be two-fold. Systems could either be used for management control or for quality improvement (9,13,19). When management control was the objective, the emphasis was on using the system to maintain existing organizational processes. Systems that were used for quality improvement, however, sought to bring about enhancements to these processes. While purchasers of services used PM as a tool for management control, health care provider organizations tended to emphasize internal feedback to promote learning and development within their organizations. The evidence suggests that this latter perspective was the least common way in which PM systems in health were used (20).

The rationale for developing a PM system could vary, therefore **upfront articulation of strategic goals and the organizational strategies to achieve these goals were identified as being critical to the success of the system (3,9,13,14). Furthermore, unambiguous alignment of strategic goals with the incentive and reward systems within the organization was required. (19,20).** Organizational goals could sometimes be incongruent, for example, cost reduction goals could have a negative impact on patient safety. **The BSC was identified as a viable model to make such potential conflicts readily evident (9).**

2. Organization transformation strategies

Six Sigma, Lean, and Hardwiring Excellence transformational strategies were assessed in three systematic reviews.

There is some evidence that the **Six Sigma strategy** is effective in improving different health care processes, including, surgery turnaround time; access to clinic appointments; scheduling of diagnostic procedures; and compliance with infection prevention control procedures (10,21). **Hardwiring Excellence** interventions were also found to be effective in improving patient satisfaction scores (10). One high-quality review (17) found the **Lean strategy** had no positive impact on patient satisfaction, health outcomes, financial costs or employee satisfaction, however, another review of low-quality (10) reported Lean interventions being beneficial in laboratory settings and when applied to development of a patient safety alert system. Another medium-quality review (21) also found that it had an effect on improving surgical care and operating theatre efficiency. While some organizations have implemented **combined transformational approaches**, no evidence of the benefits of adopting this approach is available.

Key Definitions

Six Sigma:

An organized and systematic method for strategic process improvements and new product and service development. It relies on statistical tools to bring about reductions in customer defined defect rates (12).

Lean:

A widely used quality improvement methodology initially developed for the automotive and manufacturing industries, but recently expanded to the health care sector. The Lean approach begins with identifying and removing waste to add value to clients, with focus on work processes, quality, and efficiency (17).

Hardwiring Excellence:

A transformational strategy that takes a customer-focused and employee-centered approach combined with organization-wide training and leadership development to bring about significant cultural change, quality improvement and financial gain (10).

Transformational strategy:

Plan of action designed to bring about organizational transformation by changing organizational practices and organizational culture (10).

3. Individual performance improvement interventions used in health care organizations

Nine systematic reviews and two evidence synthesis documents identified four different types of performance improvement strategies that have been applied in health care provider organizations and have been evaluated. These strategies were public disclosure; external inspections; strategic purchasing; and clinical governance.

Public reporting

Public reporting or disclosure of health care providers (individuals or organizations) performance information is used as a tool to stimulate quality improvement. The *raison d'être* is that it would empower patients and consumers to make better choices, and this type of soft competition would in turn cause providers to improve service quality. **There is moderate evidence that disclosing data about hospital quality to the public encourages quality improvement activities at those institutions (22). However, the effect of public reporting on individual health care providers is mixed.** One high-quality review (25) found no consistent evidence that public performance reporting improved individual providers' care, or acted as an incentive for them to initiate quality improvement processes. Another review from the surgical discipline found that it acted as an incentive to low-performing surgeons to improve quality (23).

External inspection

External inspection is the process by which activities of health care organisations are examined against standards developed outside of the institution. The inspection process compares the organization's performance against objective external standards, with the assumption being that identified gaps would subsequently be closed, therefore resulting in higher quality of service (16). The type of inspection could vary and could be an audit, peer review, statutory inspections or as part of an accreditation process. We found two reviews (one review and an update of the same study) that looked at the role of external inspections, in promoting adherence to evidence-based standards (16,24). **The evidence from these reviews is mixed. External inspections was found to improve compliance with accreditation standards and hospital quality indicators, however, it was not effective in achieving compliance with policies for health care acquired infections (16,24).**

Strategic purchasing

Strategic purchasing was another strategy for improving accountability and quality of health care services. Strategic purchasing is defined as using the most appropriate payment mechanisms and contracting arrangements to purchase the best services from the best providers. It requires the following steps: i) careful evaluation of population health needs; ii) health services planning and design; iii) selection of appropriate providers; and iv) use of payment arrangements and financial incentives to assure quality service delivery performance (18). While the first three aspects relate to the MoH's overall responsibility for stewardship of health system, the fourth

element, which the literature refers to as pay-for-performance mechanisms, is relevant to the Ministry's purchaser function, of which we are concerned in this brief.

One review, of low-quality, (27) examined the effect of pay-for-performance on the behaviour of health care providers (individuals and organizations) with respect to the quality of care they delivered. Two types of pay-for-performance mechanisms were examined: Contractual arrangements that rewarded service providers for making quality improvements or attaining or surpassing performance benchmarks; and systems of direct payment to providers to improve quality.

This review could not make any conclusive judgements about the impact of these measures, as there was limited availability of high-quality evaluation studies about them.

An evidence synthesis¹ document on pay for performance concluded that while pay for performance could improve the quality of care, the effectiveness of pay for performance programs was shown to be highly dependent on the design of the scheme and the context in which it is implemented. Benefits of pay-for-performance programs included improved process of care and decreased inequalities, overall health care expenditures and lengths of stay. Moreover, pay-for-performance schemes resulted in enhanced processes, access to care and aggregated rates of risk-adjusted surgical complications. Nonetheless, the evidence synthesis document also highlighted potential harms associated with pay for performance including neglect of un-incentivized aspects by providers, rise of health inequalities, improvement of documentation rather than actual services and upsurge of gaming behaviours comprising up-coding and manipulating data. Several strategies were identified to overcome potential barriers to pay for performance programs including the use of a combination of process and outcome indicators, regular involvement of stakeholders throughout different stages, selection of targets based on baseline room for improvement and use of absolute targets, use of positive rather than competitive incentives, and directing incentives at individual physicians or small groups rather than at the organizational level. We also identified one realist review (18) that addressed the topic. Realist reviews provide details about how interventions work, (or why they fail), as opposed to evidence about their effectiveness. This review identified three key factors that were likely to influence providers' willingness to improve performance in response to a purchaser's purchasing intentions. These were: i) the degree of autonomy the provider had to respond to the purchaser's requirements; ii) the overarching governance mechanisms used to hold providers accountable; and iii) the prevailing balance of power between the purchaser and the provider which shaped the dynamics of change (18).

Clinical governance

Clinical governance is a systematic approach that uses a combination of strategies, to hold service providers accountable for delivering quality health care. Clinical governance models could be applied at various levels—national, regional, or organizational. At the organizational level,

¹ <https://www.aub.edu.lb/k2p/Documents/K2P%20Briefing%20Note%20-%20Pay%20for%20Performance%20-%20March%2021%202018.pdf>

clinical governance focuses on health care services quality management (15). **Key components of clinical governance include education and training of providers, audits, performance appraisals, and clinical guidelines. An evidence synthesis document² found compelling evidence from numerous systematic reviews demonstrating the effectiveness of each of these interventions in improving quality of care and patient safety in health care organizations.**

The evidence synthesis document included **one overview of 26 systematic reviews, which found that continuing medical education (ranging from educational meetings to more expansive learning activities) improves physicians' knowledge, attitudes, behaviours and performances as well as patient health outcomes.** In terms of continuing medical educational techniques, interactive methods (audit/feedback, interactive education, academic detailing and reminders) were the most effective at improving performance and patient health outcomes, followed by clinical practice guidelines. The evidence synthesis document also found strong evidence supporting the effectiveness of audit and feedback tool in improving clinical performance of healthcare providers. One of the systematic reviews found that **audit and feedback can improve quality of care by 10%.** It was also found that audit and feedback is most effective if provided by a supervisor or a colleague, delivered more than once (preferably in written format), frequent, individualized and includes specific goals and action plans. The evidence synthesis document also included two systematic reviews which found that the **use of multisource feedback (or 360-degree evaluation tool enhances physician performance and reflects on where change is required in their practice) is the most appropriate and practical method to adopt in terms of time and cost effectiveness.** In multisource feedback, physicians usually complete a self-evaluation instrument and receive feedback from a number of sources including medical colleagues, preceptors or supervisors and non-physician co-workers (e.g. pharmacists, nurses) as well as their patients. It was also mentioned that although multisource feedback leads to performance improvement, many factors such as individual factors, the context of feedback, and the presence (or absence) of facilitation have effects on the magnitude of the response. Another review sought to evaluate different models on quality of care. This review concluded that **while the use of performance indicators and clinical standards was important for driving clinical quality, reliance on guidelines alone was generally not effective, rather supporting a combination of governance models.** Professional leadership as well as institutional capacity to support uptake at the practice level were also necessary to drive and sustain quality and safety (15).

² <https://www.aub.edu.lb/k2p/Documents/Full-report-%20K2P%20Policy%20Brief-%20Addressing%20Medical%20Errors%20in%20the%20Lebanese%20Healthcare%20System-%20English.pdf>

What Countries are Doing

The PM systems used in three jurisdictions are summarized in Table below. This table illustrates that the underlying characteristics of the health system strongly influences the PM approach and tools that can be applied.

Table: Summary of Performance Management Systems used in three countries: England, Canada, and USA

Territory	Type of Health system	Performance Management System
England	<ul style="list-style-type: none"> - Mainly public provision of care. - Financing through taxes. Care is delivered by local National Health Service (NHS) trusts. - Services are commissioned by NHS England and clinical commissioning groups (CCGs) for general practitioner services. 	<ul style="list-style-type: none"> - Organisational performance is assessed against a series of indicators contained in the NHS Outcomes Framework (NHS OF). - The NHS OF is developed by the Department of Health and Social Care to monitor health of the population. It contains 5 healthcare- related domains: preventing people from dying prematurely; enhancing quality of life for people with long-term conditions; helping people to recover from episodes of ill health or following injury; ensuring that people have a positive experience of care; treating and caring for people in a safe environment and protecting them from avoidable harm (30). - Each NHS trust is responsible for achieving and reporting on the national targets. - Clear thresholds for intervention for underperforming organisations and processes for demonstrating improved performance are included. - Combined performance statistics are disseminated to the population by NHS England.
Canada	<ul style="list-style-type: none"> - Provincial system 	<ul style="list-style-type: none"> - Each Province or Territory develops and implements their own framework. Canadian Institute for Health Information's (CIHI) PM framework and Alberta Health System Outcomes and Measurement Framework area are regarded as best practice models within the system. - CIHI's model provides a structure for assessing health system performance. Health system outcomes are defined as the ultimate goals of the health system (improved health status, health system responsiveness, and value for money),

Territory	Type of Health system	Performance Management System
		<p>while delivery of health services to the population is categorized as an intermediate objective to achieve these goals (31)</p> <ul style="list-style-type: none"> - Alberta's PM system uses a logic model approach distinguishing between three cascading outcome categories: population, system and intervention outcomes (32). - The Northwest Territories' framework incorporates health services and social services into one comprehensive framework (33)
USA	<ul style="list-style-type: none"> - Mainly private provision of care delivered through Health Maintenance Organizations (HMOs) or Preferred Provider Organizations (PPOs). Public funding is made available through Medicare and Medicaid and provision through Accountable Care Organizations (ACOs). - Health financing is based upon private insurance. Fee-for-service charged with reimbursement on an individual basis or through pre-paid health plans 	<ul style="list-style-type: none"> - The Centers for Medicare and Medicaid Services (CMS) analyse data, identify trends and make recommendations for improving Medicaid program performance (34). - Performance evaluation for individual HMOs, PPO or ACOs is done against cost and quality benchmarks. Given that health service delivery is largely private, emphasis is placed on financial metrics. Performance measures include "cash flow," "cost per case," and "percent of revenue from outpatient care," among others. BSC are extensively used by hospitals within these systems and they are linked to reward systems (20).

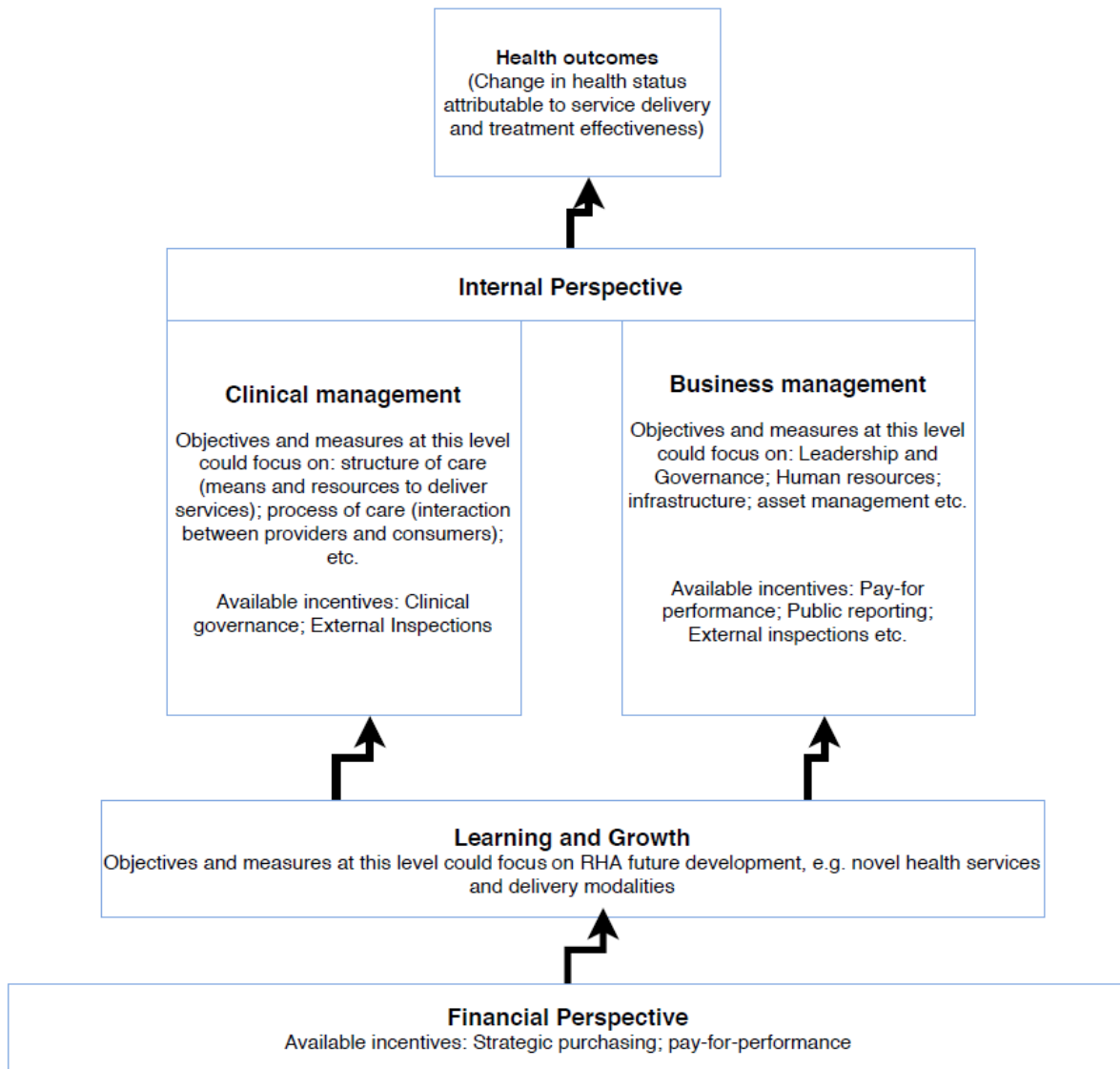
Implications for Trinidad and Tobago

The review of literature about PM frameworks, organization transformation approaches and individual performance improvement strategies, has demonstrated that there is no universally valid or ready-made PM system that is available for adoption by the MoH. The Ministry would have to custom design its own system, carefully considering the strategic goals it wishes to achieve. This would require thorough deliberation about the different perspectives that provide a multifaceted view of RHA performance and mapping out a strategy to achieve performance improvement.

In developing this strategy map, the MoH would have to determine the relative emphasis it wishes to place on RHA culpability for existing business processes, versus learning and growth to stimulate improvement across the public health care delivery system. One approach, used by not-for-profit health care organizations, is to consider the financial perspective as the foundation for strategy development. Financial resources are critical for investment in learning and growth, which in turn would result in improved internal processes (business and clinical management). Improvements in service delivery and quality care would then result in improved health outcomes (28).

Once the strategic approach is clearly mapped out, strategic objectives for each perspective, and the performance measures for each objective could then be developed into a consolidated multidimensional scorecard. **Performance measurement alone, however, will not be sufficient to achieve effective performance management (9,11,19) and secure the improvements in service delivery that the MoH desires. Incentives (and disincentives) for the RHAs to act upon agreed performance measures will also have to be integrated throughout the system (14,19,27–29).** The system of incentive should be implemented as strategic initiatives at each level. Figure 3 provides a conceptual strategy map that could guide development of the Ministry's PM system.

Figure 3: Conceptual strategy map integrating performance measurement with incentive system



Source: Author’s illustration based on study data (3,12,13)

Implementation Considerations

The following factors should be considered when implementing a PM system in Trinidad and Tobago:

- Formulation and articulation of a clear strategy to move the RHAs beyond their current level of performance is the first requirement. Mapping the logic of how this strategy would be implemented through a series of objectives and initiatives, would also be essential.

Within this framework, performance measures (indicators and targets) could then be developed. Performance measures should be clear, consistent, and fit into the strategic framework. Indicators should satisfy the criteria of validity, reproducibility, acceptability, feasibility, reliability, sensitivity and predictive validity (19).

- What is to be included in the PM system should not be influenced by ease of measurement. Instead, the aim should be to measure performance that is directly attributable to the RHAs and are in alignment with the prevailing accountability relationships. Measurements should also provide information that is relevant to the multiple users of the system—the MoH, the RHA Executive Management; the RHA Board, etc. It would be important to acknowledge that outcomes can be influenced by factors outside of the RHAs' control; care must therefore be taken to avoid holding them RHAs accountable in such cases.
- The PM system should include clear links to an incentive system to motivate RHA action towards performance achievement. While existing initiatives such as the Annual Service Agreement, and the Quality Management system may not be considered part of the new performance management tool, these mechanisms can be used as part of the strategic incentive system. The MoH would have to determine how robust the links between these systems should be. It is also important to note that the use of incentives can have unintended effects (9,19,27). For example, public reporting or benchmarking (i.e. process for comparing performance measures across different organizations) one RHAs performance can undermine public confidence and use of services in others. Mechanisms would have to be put in place to monitor and counteract possible adverse outcomes.
- Use of sound methods to interpret the data generated by the system would be required paying attention to control possible confounding factors. Investment in analytical capabilities and information technology support may be required. Having a strong health information system to enable the monitoring of performance is critical and investments in both human resources and relevant technology are required. The cost (both financial and effort) of implementing a complex measurement system must be weighed against its usability and benefits.
- The PM system can ensure the objectives of the MoH and the RHAs are well aligned. RHAs can also use the system for internal feedback to achieve learning and growth within their institutions. Development of a workable system therefore requires concerted effort by the two parties and there should be open dialogue to identify what is doable given available resources and what expectations are realistic. Finally, the PM system itself would require regular monitoring and evaluation to identify opportunities for its further development and to adjust for any unintended outcomes.

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Appendix 1 - Definitions

Term	Definition
Benchmarking	A process for comparing performance measures across different organizations (14).
Clinical governance	A systematic and integrated approach to ensuring providers are accountable for delivering quality health care. Clinical governance is delivered through a combination of strategies including ensuring clinical competence, patient involvement, education and training, risk management, use of information, and staff management (15).
External inspection	A process by which characteristics of health care providers' activities are assessed or analysed against ideas, knowledge, or measures developed outside of their organisation (16).
Hardwiring Excellence	A transformational strategy that takes a customer-focused and employee-centered approach combined with organization-wide training and leadership development to bring about significant cultural change, quality improvement and financial gain (10).
Lean	A widely used quality improvement methodology initially developed for the automotive and manufacturing industries, but recently expanded to the health care sector. The Lean approach begins with identifying and removing waste to add value to clients, with focus on work processes, quality, and efficiency (17).
Performance indicators	Explicitly defined and measurable items that can be used to evaluate and monitor the status of organizational or system processes or performance (13)
Quality improvement	A systematic data-guided activity designed to bring about improvements in organizational processes or products (13).
Six Sigma	An organized and systematic method for strategic process improvements and new product and service development. It relies on statistical tools to bring about reductions in customer defined defect rates (12).
Strategic purchasing	A continuous search for the best services to purchase, the best providers to purchase from, and the best payment mechanisms and contracting arrangements to pay for such services. It goes beyond passive and unsystematic allocation of funds to health care providers and involves an evaluation of population health needs, planning and design of health care services, qualification and selection of appropriate providers, and the incentivization and management of providers to ensure good performance (18).
Transformational strategy	Plan of action designed to bring about organizational transformation by changing organizational practices and organizational culture (10).

Appendix 2: Summary of Findings from systematic reviews, primary studies, and grey literature

Type of study/ Focus of Review	Key Findings	Countries included	Quality rating
Systematic review addressing question other than effectiveness/ Review of the use of performance management systems in public health organizations (9).	This literature review included an analysis of 55 papers on performance measurement and management in public health organizations. A conceptual framework for viewing performance measurement and the risks involved in their use were identified. Main conclusions: Health care is a complex and challenging. Not everything in health care can or should be measured. There is need to balance the number of indicators that may be required to provide enough information for decision-making. Performance can be influenced by factors other than the interventions being assessed, thus there would be a need to control for confounding factors and safeguard against holding providers accountable for outcomes they cannot control.	Not Available (NA)	NA
Systematic review addressing question other than effectiveness/ Use of performance indicators to improve health care quality (19).	One hundred and twenty-five primary studies were included in this review which explored problems and potential solutions in implementation and use of performance indicator systems. The review concluded that performance indicators were used in two main ways: as a mechanism for external accountability and verification; and as a mechanism to drive internal quality improvement. Data interpretation was critical as indicators were not capable of demonstrating why particular results were obtained. Clear objectives, involvement of stakeholders in system development, and in data interpretation, were some of the factors that facilitated successful use of indicator systems.	NA	NA

Type of study/ Focus of Review	Key Findings	Countries included	Quality rating
Systematic review addressing question other than effectiveness/ Performance measurement in the not-for-profit health care sector (12).	Organizational performance management is important for the survival of not-for profit health organizations. The objective of the review was to examine organizational performance measurement in non-government organizations. However, the included studies did not relate solely to this sector. Three organisational performance frameworks were identified: the BSC, a Primary Health Care Attributes Scale and the Looking Glass Evaluation Tool. The authors concluded that the BSC was likely to be an effective option for the not-for-profit sector and identified the following key measurement domains for this sector: quality of service; finance; stakeholders (customers and clients); people and culture; and governance and business management.	Canada; Finland; UK; USA	Medium 5/9
Systematic review addressing question other than effectiveness/ Performance evaluation in health care, with emphasis on allied health services (3).	This review sought to identify the core elements of a system for evaluating performance of allied clinical health services. Thirty-seven primary studies were included. Barriers to implementation were identified. The study concluded that information from many different sources would be needed. At the organizational level, performance measures should be linked to the strategic planning of the service and the organisation's overall values and standards. Reporting of results should be built into the performance evaluation system. Time, costs, and manpower needed to support implementation were identified as challenges.	NA	NA
Systematic review addressing question other than effectiveness/ Quality improvement performance measurement and improvement frameworks in health, education and social service systems (13).	Study provided systematic literature review of performance measurement and improvement frameworks in health, education, and social services systems. One hundred and ten primary studies were included, and 111 frameworks were identified. The most used framework identified was the BSC.	Afghanistan; Australia; Belgium; Canada; China; Jordan; Netherlands; New	Medium 6/9

Type of study/ Focus of Review	Key Findings	Countries included	Quality rating
		Zealand; Spain; Switzerland; Taiwan; Turkey; UK; USA	
Overview of systematic reviews/ Impact of disclosure of health care providers' performance on quality (22).	This study was an overview of systematic reviews to assess the evidence about the effects of governance arrangements for health systems in low-income countries. Governance arrangements were classified as authority and accountability for: health policies; organisations; commercial products; health professionals; and stakeholder involvement. With respect to authority for organizations, the review found moderate evidence that public disclosure of performance about individual health care providers resulted in the selection of providers with better quality services.	Bangladesh; Bolivia; Cambodia; Canada; Denmark; El Salvador; Germany; India; Malawi; Nepal; Netherlands; Norway; Pakistan; South Africa; Spain; Sweden; Taiwan; England; USA	NA

Type of study/ Focus of Review	Key Findings	Countries included	Quality rating
Systematic review addressing question other than effectiveness/ Application of the BSC in three European countries: Spain, Italy and Portugal (20).	<p>This study provided a literature review of the application of BSC in Spain, Italy, and Portugal, compared with its use in UK and USA.</p> <p>The reviewers noted that the characteristic of the health system (private, public provided, tax-funded or universally provided care), to a large extent determined how the BSC systems were implemented. It was unusual for public institutions in the three study countries to develop organizational objectives that reflected a specific strategy. The authors therefore concluded that the BSC in those 3 countries was not used for the purpose of organizational alignment. For the BSC to be useful, they concluded that each organization would have to adapt the number and types of perspectives used, performance domains, and key performance indicators.</p>	NA	NA
Systematic review addressing question other than effectiveness/ Review of performance measurement systems in health and mental health services (14).	<p>This was a relatively old review that examined models, practices and effectiveness of performance measurement systems used in health and mental health services. They noted that there was no consensus on the domains for measurement across these various frameworks; nor was there consensus about which framework was the best to be used. Overall, performance measurement was a beneficial exercise for organizations, however, they noted that data collection and analysis was a complex and costly issue and that significant effort was required to interpreting and report performance results.</p>	NA	NA
Systematic review of effects/ Evaluation of external inspection on compliance with standards and impact on improving organisation behaviour and health care (16).	<p>The objective of this systematic review, and the updated study, was to evaluate the effectiveness external inspection of healthcare organisation as a tool to achieve compliance with standards. There was a limited number of primary studies meeting the inclusion criteria. Only 2 studies were included in the final review. Although</p>	South Africa; England	High 9/9

Type of study/ Focus of Review	Key Findings	Countries included	Quality rating
Systematic review of effects/ Evaluation of external inspection on compliance with standards and impact on improving organisation behaviour and health care – Update (24).	one of the primary studies reported an improvement in compliance with hospital accreditation standards, because the certainty of the evidence was low, the authors cautioned that firm conclusions about effectiveness could not be made.		High 8/9
Systematic review of effects/ Potential contributions of clinical governance models on quality and safety in Australian primary health care (15).	This low-quality review examined the potential of different models of clinical governance to improve health quality and safety. Nineteen primary studies were included in the review. Audits, use of performance indicators, and peer reflection were identified as the most widely used governance strategies in the literature. The evidence of effectiveness of these strategies was mixed, however, mechanisms that recognise professional leadership and allowed reflection on professional practice were identified as being among the more promising.	UK; Australia; USA; New Zealand; Philippine; Spain; Belgium; Germany; Netherlands	Low 2/9
Systematic review of effects/ Review of evidence of effectiveness of Six Sigma, Lean, and Studer's Hardwiring Excellence organizational transformational models (10).	This review was of exceptionally low quality. It examined the evidence of effectiveness among three organization transformational strategies—Six Sigma, Lean/Toyota Production System, and Studer's Hardwiring Excellence—in health care. The strategies were implemented in various health care settings, for example, in the Medicare/Medicaid program, hand hygiene and surgical programs. The reviewers concluded that implementation of the strategies was successful in achieving intended outcomes, however, many of the included primary studies had methodological limitations, which might undermine overall validity of the findings.	USA	Low 1/10

Type of study/ Focus of Review	Key Findings	Countries included	Quality rating
Systematic review of effects/ Evaluation of the application of quality improvement methodologies from the manufacturing sector, in surgical care settings (21).	Nine major quality improvement methods were examined. Many were found to be applicable to surgical care and had a significant impact on surgical processes such as reducing infection rates and increasing operating room efficiency.	USA; Netherlands; Taiwan; France; Germany; India; Australia; Finland; Scotland; Switzerland	Medium 5/10
Systematic review of effects/ Public release of performance data and behaviour of health care consumers, professionals and health care organisations (25).	Releasing performance information about providers and hospitals is used to stimulate performance improvement. In examining the effectiveness of this strategy, four primary studies were included. The authors found no consistent evidence that public release of performance data changed consumer behaviour or succeeded in improving quality of care.	USA; Canada	High 8/9
Systematic review of effects/ Evaluation of the effect of Lean interventions on worker and patient satisfaction, health and process outcomes, and financial costs (17).	Lean is an organizational transformation intervention used in the automotive and manufacturing industries. This review examined the effectiveness of its application to health care settings. Twenty-two primary studies were included in the review. There was no evidence to support the use of Lean interventions for quality improvements in healthcare.	Australia; Canada; Ireland; Netherlands; Sweden; UK; USA	High 8/11
Systematic review of effects/ Evaluation of public reporting of surgeon outcomes as an incentive to improve quality (23).	Twenty-five studies, mainly from the USA were included. Public reporting was found to work as an incentive to low performing surgeons to improve quality. However, negative consequences were also identified, namely adverse selection of patients, by providers to prevent poor performance ratings.	UK; USA	Medium 6/10

Type of study/ Focus of Review	Key Findings	Countries included	Quality rating
Systematic review of effects/ Review of effective strategies for improving organizational performance in low and middle income countries (26).	This was a World Bank commissioned review as part of a comprehensive study to strengthen health services implementation in low- and middle-income countries. Strategies for improving performance were classified into 5 categories: public oversight strategies; provider human resource strategies; provider performance improvement and strategies; public provider reorganization; household and community empowerment. No blueprints for improving the performance of health organizations were identified. Promising provider improvement strategies included: human resources development and strengthening management systems.	NA	NA
Systematic review of effects/ Financial incentives and behaviour of health care providers with respect to the quality of service delivery (27).	Providing financial incentives to health care providers is used as an incentive to improve service quality. The review evaluated this intervention for its effectiveness. Two types of financial interventions were highlighted: direct payments to providers and pay-for performance systems. Thirty-six publications pertaining to these interventions were reviewed by the authors. The findings on effectiveness were mixed.	NA	Low 3/9
Systematic review addressing question other than effectiveness/ Realist review of strategic purchasing (18).	Strategic purchasing or commission is a health financing approach that carefully assesses the needs of the population and purchases required services from the most suitable providers. Four types of participants are usually involved in this system: the government who sets the strategic goals and policy; the purchasers, the provider and patients or clients. The realist review, which included 58 studies, provided insights about facilitating factors for successful strategic purchasing. Among these was the need for government stewardship to clearly outline national policy objectives and to provide specific targets and incentives to purchasers and providers.	No specific country focus	Low 3/9



Rapid Response Brief

**Accountability Mechanisms for Performance Improvement of Regional Health Authorities
in Trinidad and Tobago**

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