World Health Organization
Centre for Health Development

Research brief

Varying effects of payment mechanisms on improving the quality of chronic care: findings from a scoping review

Summary

- Purchasing chronic care services in a strategic way is critical to contribute to universal health coverage objectives, including improving the quality of care, and ultimately to achieve better health outcomes. This is important within the context of the growing burden of chronic diseases worldwide and the rising costs for health systems.
- This scoping review summarizes payment arrangements used as one key instrument of purchasing to improve the quality of care for patients with chronic diseases and explores evidence of their effectiveness in achieving the desired outcomes.
- Most of the literature is from high-income countries (HICs), with various pay-for-performance (P4P) arrangements tied to chronic disease programmes being most frequently reported. The evidence of the impact of P4P arrangements on the quality of chronic care was inconclusive, due to weak study designs and the diverse payment arrangements and quality metrics studied. A few studies tested the effectiveness of other payment models, including bundled payments and capitation, but none led to any strong conclusions.
- Improving the quality of care is a complex endeavour. Purchasing instruments play a role within these efforts. However, they are insufficient to improve quality in isolation from wider health system actions. Moreover, payment methods need to be carefully designed to avoid creating health system distortions or negatively interfering with the intrinsic motivation of health workers. Moreover, fundamental health system inputs need to be available, such as qualified health workers and medicines, as it is otherwise questionable how care quality and medication adherence can be improved through provider incentives.

Methods

A scoping review of the peer-reviewed literature was conducted to study how purchasing instruments have been used to influence providers' behaviour and their impact on the quality of chronic disease care. Articles published in Chinese, English, French and Spanish between 2011 and 2021 were considered. The search retrieved 6 486 records, of which 81 met the inclusion criteria; an additional 7 articles from the grey literature were also included. The analysis focused on payment methods, as most papers reported on this and not on other types of purchasing instruments. For the analysis of effectiveness, the literature was further restricted to those that reported on quality outcomes and used valid experimental study designs that enabled the attribution of effect.

Results

- Of the included studies, 81 were quantitative and 7 were qualitative. Nearly one third of the studies were from China, and the rest were mostly conducted in high-income settings.
- P4P was the most frequently studied form of payment. These P4P arrangements were quite diverse and included combinations of capitation with P4P, bundled payments with P4P, P4P in addition to fees for service, and salary with P4P. These arrangements were generally tied to the implementation of chronic disease programmes operated through health insurance schemes or governments.
- A key feature of these programmes was the significant information technology and financial management systems they entailed. Payment arrangements were often a component of a broader programme of quality improvement actions.

- There was some evidence that P4P arrangements were effective for improving certain aspects of care quality for chronic diseases. However, the level of certainty of the evidence was generally low due to weaknesses in study designs.
- The quality indicators that were assessed were diverse. The studies typically did not use multidimensional quality of care frameworks and instead assessed only a few indicators, most commonly those associated with intermediate health outcomes (e.g. controlled blood pressure and cholesterol levels) or processes (e.g. implementation of tests recommended by guidelines). Although many of the service delivery models to which the payment methods were tied addressed improving the coordination of and integrating chronic disease care, we found little evidence of impact on the indicators that specifically measured these dimensions.
- There was also limited consideration of equity in these studies. Yet the one issue that was explored particularly in relation to P4P was the risk of provider-driven adverse selection of patients: that is, the risk that providers would exclude from quality improvement initiatives groups of patients considered to be at high risk (e.g. people with lower income or with multimorbidity) for whom delivering improvements in the quality of care may have been challenging.
- Barriers to implementing purchasing arrangements to improve the quality of chronic disease care included conflicting agendas across stakeholders; a lack of information for and communication with patients about possible changes or entitlement to benefits, resulting in dissatisfaction among patients; and concerns by health workers about a shift in organizational culture towards financial imperatives. Investment in capacity development within providers' organizations is an enabler, but it involves significant transaction costs in reorienting financial systems to be compatible with purchasing in terms of processes (i.e. routines), resources (e.g. human capital, information systems) and institutions (e.g. rules and regulations).

Conclusions and lessons learned

- The lessons drawn mainly from studies in HICs suggest that purposively aligned payment arrangements for chronic care are a promising tool for setting incentives for and contributing to improving the quality of care. Nonetheless, more attention needs to be given to the design of such initiatives to optimize the impacts on care quality and equity, and to evaluate these initiatives.
- To avoid providers cream-skimming of patients with lower health risks programmes could be designed with stronger adjustments for patients' health risks in their payment schedules. Likewise, graded reward systems could be established, as opposed to all-or-nothing payment scenarios, to offset a perceived penalty that providers may incur in enrolling patients with complex and hard-to-manage illness. With such adjustments, P4P-type arrangements have the potential to steer providers' efforts towards more vulnerable population groups.
- Significant information technology infrastructure and resources are required to implement such arrangements, potentially limiting their applicability to low-resource settings.
- More research will be useful to understand the feasibility and effectiveness of payment arrangements to strengthen the quality of chronic care, particularly in low- and middle-income settings. Future research could also focus on the design characteristics of the payment arrangements and how they did or did not contribute to effectiveness and sustainability.
- Finally, there is also a need for wider use of quality metrics based on comprehensive conceptual frameworks that factor in dimensions of particular interest for chronic care, such as care integration.

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