World Health Organization
Centre for Health Development

Research brief

Effects of purchasing and service delivery on the quality of chronic care: a scoping review

Summary

- This scoping review aimed to assess the effects of purchasing arrangements or related payment methods and their associated service delivery features on the quality of care for patients with chronic disease.
- The evidence of effects on quality was generally of low or very low certainty, although all payment methods reviewed had some positive impact. Positive impacts with evidence of high or moderate certainty were found for capitation and global budget models (*n* = 2 studies), shared savings and shared risk (*n* = 1 study) and pay-for-coordination (*n* = 1 study). Across these four articles, service delivery models consisted of, respectively, hospital-based care (*n* = 2), an accountable care organization (ACO) (*n* = 1) and a patient-centred medical home (PCMH) (*n* = 1). Integrated care models and comprehensive care provided by general practitioners (GPs) were also associated with a positive impact on quality, although with low or very low certainty of evidence.

Methods

- The review of academic and grey literature identified articles that used causal inference methods and were published between 2013 and November 2022.
- The analytical approach consisted of clustering articles about similar purchasing or payment methods, summarizing the evidence within and across the clusters, and highlighting service delivery and institutional design features potentially impacting the quality of care. A modified approach based on the Grading of Recommendations Assessment, Development and Evaluations (GRADE) methodology was used to discern the certainty of evidence across articles.

Results

- The review included 51 articles that were clustered into 5 categories: capitation and global budgets (*n* = 22), pay-for-coordination (*n* = 12), shared savings and shared risk (*n* = 8), blended capitation (*n* = 4) and bundled payments (*n* = 2). Three articles compared different types of purchasing arrangements.
- Most articles focused on initiatives in the United States (*n* = 36), followed by those in China (*n* = 5), Canada (*n* = 4), Germany (*n* = 3) and the Netherlands (*n* = 2).
- Most articles measured quality based on service utilization (*n* = 34), while other measures included chronic disease management and prevention services (*n* = 27) and health outcomes (*n* = 26), or a combination of these.
- The evidence of impact on quality was generally of low or very low certainty. Positive impact on quality with evidence of high or moderate certainty was found in the capitation and global budget cluster (*n* = 2), the shared-savings and shared-risk cluster (*n* = 1) and the pay-for-coordination cluster (*n* = 1). These were implemented, respectively, as part of hospital-based models providing inpatient and outpatient care to general populations; an ACO, which entailed cross-sectoral cooperation among physicians, hospitals and other providers; and a PCMH providing primary care for a mixed population of patients.
- The remaining articles indicated there were some positive impacts on the quality of chronic care in each cluster, although with low or very low certainty of evidence.
- Other service delivery models implemented alongside purchasing arrangements that had a positive impact on quality, although with low or very low certainty of evidence, included integrated care models (e.g. integrated across

health and social care, different types of providers or services) and comprehensive care provided by GPs.

- Capitation and global budgets, shared savings and shared risk, and pay-for-coordination had positive effects on selected indicators of quality of care, both when they included additional financial incentives tied to quality measures and also when they did not.
- In terms of further supportive elements, capitation and global budgets, shared savings and shared risk, pay-for-coordination and blended capitation were also implemented together with disease-management schemes or programmes targeted to populations with certain chronic diseases. Health information technology was commonly implemented to guide prescribing through data-based, computerized decision support; to share information across providers; and to create disease registries to ensure patients with chronic diseases were regularly seen.
- Several articles related to global budgets and pay-for-coordination methods suggested that inconsistent incentives between different levels and providers (i.e. in terms of the risk taken on, potential financial gains, which providers and services were included) can hinder improvements in quality. Choice overload, whereby financial incentives are tied to too many quality measures, can lead to providers prioritizing some measures over others.
- The certainty of evidence was generally low, and often authors did not provide sufficient details concerning the purchasing methods and the service delivery models implemented alongside them.

Conclusions and lessons learned

- Interpreting the generalizability of findings related to specific purchasing arrangements to other settings requires consideration of the particular health care systems in which they were embedded.
- Financial incentives tied to defined quality improvement measures can incentivize improvements in the quality of chronic care, particularly when based on quality measures relating to chronic care management and preventive services.
- In the absence of financial incentives tied to quality measures, population-based payment methods can still improve the quality of care by encouraging providers to more carefully manage patients with chronic conditions as a way to manage costs. The same is true for pay-for-coordination arrangements, likely due to the PCMH service delivery model, which includes the provision of team-based and patient-centred care, often implemented concurrently.
- To positively impact the quality of care, purchasing arrangements should be aligned with service delivery models and their objectives, and should ideally focus on person-centred, team-based care and case management. Purchasing arrangements designed to incentivize and reward cross-sectoral cooperation, person-centred care and case management, such as pay-for-coordination, global budgets and shared savings, can lead to improvements in the quality of care.
- Financial incentives in alternative purchasing arrangements need to be consistent for all providers and also across different settings and levels of care. All participating providers should take on some form of responsibility and risk.
- Policy-makers should be mindful of not incorporating too many quality measures into financial incentive schemes to avoid choice overload.
- To improve comparability and better isolate the impact of certain elements on quality, researchers should strive to explicitly describe in their study the purchasing design, service delivery model and supportive elements.

This research brief is based on Simmons C, Pot M, Leichsenring K. *Scoping review on alternative purchasing arrangements: impact of purchasing, service delivery and institutional design on quality of chronic care.* Geneva: World Health Organization; 2023.