



Integrating Medicines and Medical Services in Real-World Value Assessment: Evidence from Innovative Subcutaneous Oncology Formulations in Day Treatment Settings

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Background

- China is advancing a real-world comprehensive value evaluation system to strengthen evidence generation and support more scientific health insurance decision-making.
- It also reflects a broader shift from assessing individual technologies in isolation toward evaluating their relative value within the healthcare system, particularly in the context of constrained insurance resources and growing pressure to improve allocative efficiency.
- In cancer care, innovation is increasingly extending beyond pharmacologic mechanisms to the optimization of administration routes and care delivery models. Innovative subcutaneous oncology formulations are increasingly delivered in day treatment settings, where they can reshape treatment pathways.
- However, medicines and the medical services required for their delivery are often assessed separately. As a result, the joint contribution of the medicine, delivery-related service input, and care setting may be insufficiently captured in current pricing and payment arrangements.

Objective

To assess how medicines and associated medical services jointly generate value, and whether payment mechanisms adequately account for the associated service resource requirements.

Methods

We conducted an exploratory assessment of innovative subcutaneous oncology administration in day treatment settings in China. The study had three components:

- care pathway and workflow mapping based on semi-structured interviews with healthcare professionals;
- comparative analysis of workflow, service time, staffing requirements, and monitoring needs across routine subcutaneous injection, innovative subcutaneous administration (SC) and conventional intravenous administration (IV);
- literature review of current reimbursement mapping, pricing schedules, and policy guidance relevant to injection-related medical services.

Results

Care pathway comparison suggested that innovative subcutaneous oncology administration was not simply a change in drug formulation, but a redesign of care delivery. Compared with the conventional inpatient intravenous pathway, it enabled treatment to be delivered in day treatment settings, thereby simplifying the care pathway, reducing time spent in hospital, and lowering patient treatment burden. At the service-delivery level, it also supported more flexible use of beds and treatment capacity (Fig 1).

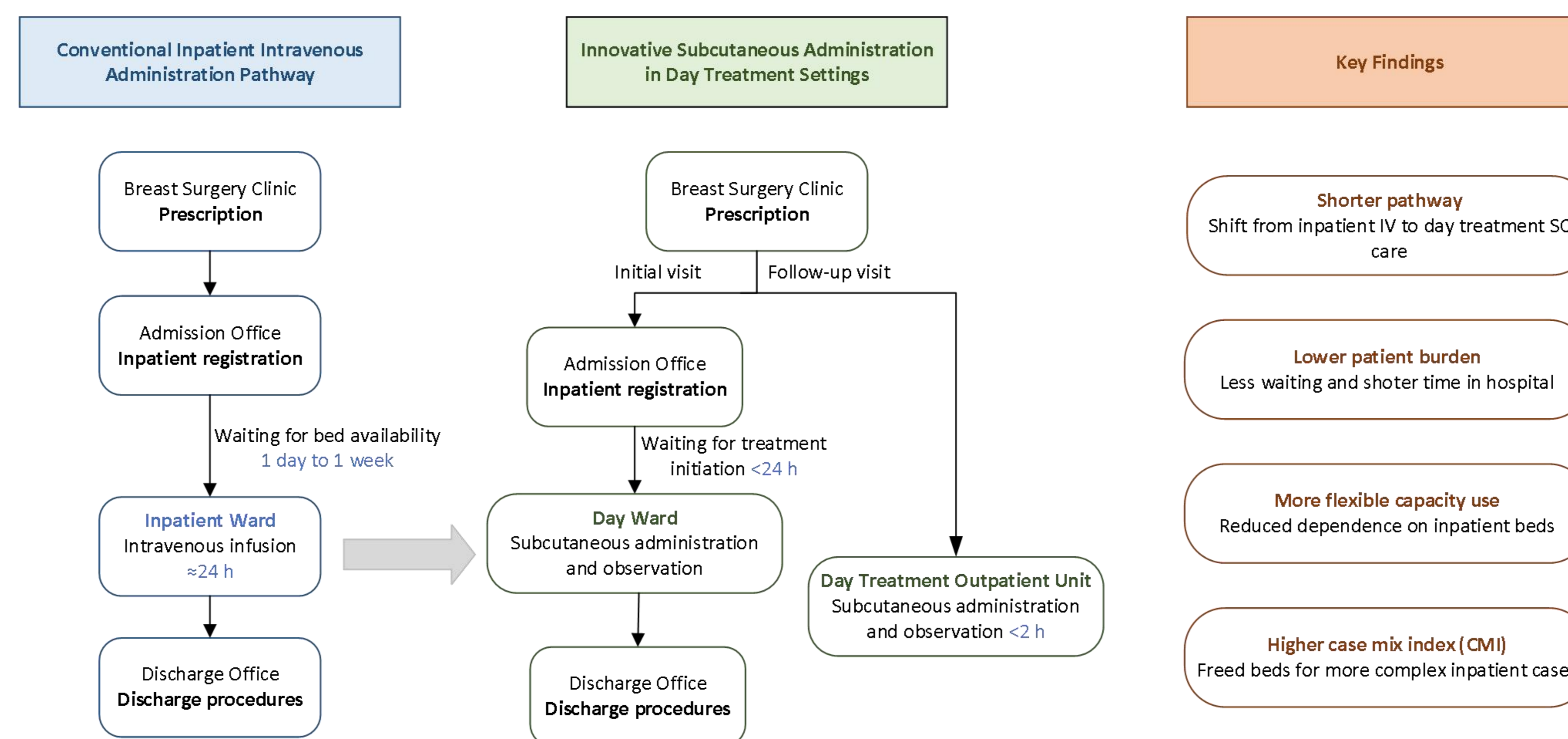


Fig 1. Innovative subcutaneous administration redesigned care pathways in day treatment settings

These pathway gains relied on intensified service delivery. Innovative subcutaneous administration required 10–15 minutes of skilled nursing time, including preparation, controlled delivery, and post-administration monitoring. Compared with routine subcutaneous injection, this reflects substantially greater technical labor intensity and operational complexity. Dedicated workflows, higher nursing requirements, and closer observation were part of this intensified service delivery (Table 1).

Table 1. Comparison of Service Requirements for Routine and Innovative Subcutaneous Administration

Domain	Routine subcutaneous injection	Innovative subcutaneous administration
Skilled nursing time	Minimal direct nursing time; administration is typically completed in about 10 seconds .	10–15 minutes of skilled nursing time, including preparation, controlled delivery, and post-administration monitoring.
Care setting and injection site	No specific setting required	Usually delivered in a day ward / convenient treatment center / infusion unit; often requires a dedicated injection area; injection sites may alternate between the left and right thighs
Technical labor intensity	Lower technical labor intensity and operational complexity.	Requires controlled slow injection, 30°–45° insertion, stable needle fixation, and closer monitoring.
Nursing requirements	Basic injection knowledge and standard operating skills are generally sufficient.	Usually requires more experienced oncology nurses and relevant training to support safe delivery and monitoring.
Supporting operational features	Limited workflow and observation requirements.	May involve dedicated clinical workflows, slower administration, closer observation, and stronger coordination with day treatment services.

Results

Despite requiring substantially greater service input, innovative subcutaneous administration generally remained mapped to routine subcutaneous injection fee items. In the study setting, average price was about ¥4 per visit, accounting for only one-third of comparable inpatient service revenue (Table 2).

Table 2. Provincial Pricing for Subcutaneous Injection and Intravenous Infusion in China

Category	Type	Average Price(Range), RMB
Subcutaneous injection	Stand-alone subcutaneous injection item	¥3.87 (1.95-6.00)
	Subcutaneous injection included under intramuscular injection item	¥3.93 (2.00-7.00)
Intravenous infusion	Intravenous infusion item	¥13.05 (3.50-55.00)

Conclusions

The real-world value of innovative therapies is realized through the joint contribution of medicines and companion intensified medical services in specific care settings. Current pricing mechanisms systematically undervalue service inputs, resulting in disincentives for providers. Integrated value assessment frameworks that consider medicines and companion medical services are needed to better reflect the true costs of value co-production.

References

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