

China's New Robot Fees Change the Math for Spine Robotics

by EOS Implicium

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China's 2026 medical-service pricing framework standardizes medical-service price items for surgical navigation and robotic assistance, giving provinces a common implementation structure. This gives hospitals a clearer basis for recovering some technology-use costs, although it does not guarantee higher earnings. The benefit for foreign spine suppliers is indirect because hospitals collect the service fees while VBP continues to limit implant unit price. Suppliers gain only if the fees support new equipment sales or leases, or increase instrument and implant sales.

New robot fees may improve cost recovery without triggering a buying wave

Before 2026, hospitals across Chinese provinces lacked a standardized way to charge separately for navigation and robotic assistance. The new framework has introduced standardized medical-service price items and **tied the charge to the role the technology performs during surgery**. Provinces can then set their own price levels or ceilings within this framework, so **permitted service charges vary by province** while following the same national structure.

Hunan province, where the new schedule took effect on September 1, 2026, shows how the pricing model could improve hospital cost recovery. Under its Class I medical-service price schedule, Hunan prices robotic-arm navigation at 50% of the main surgery fee. The minimum charge is RMB1,800, and the maximum is RMB3,600. Hunan prices participation in surgical execution at 150%, with permitted charges from RMB5,000 to RMB12,000. Hunan prices precise execution at 300% of the main surgery fee, with permitted charges from

RMB16,000 to RMB26,000. The **permitted service charge** therefore **increases with the level of robotic involvement**.

Hospital cost recovery depends on payment rules and case costs

Whether these charges improve hospital cost recovery **depends on how much the hospital actually receives under the applicable provider payment rules**. For inpatient cases, the relevant DRG/DIP payment standard also affects how much the hospital receives.

Hunan's pricing rules specify that the robotic-assistance **fee covers specified instruments and sterile consumables used with the robotic arm**. Part of the fee covers these included items, leaving **less money towards recovering capital equipment costs**. That gives hospitals a reason to negotiate robot-specific consumable prices alongside the equipment contract. Suppliers could face **pressure on recurring revenue per case, even if utilization and consumable volumes rise**.

High-volume tertiary hospitals that can use the system appropriately are still likely to benefit most. They can **spread equipment and support costs across more procedures**. However, higher utilization helps recover those fixed costs only when each additional robot-assisted case covers its incremental operating costs and contributes toward the equipment cost. Consequently, **more cases will not improve the economics if each additional case generates a loss**.

Pricing rules and practical barriers still limit wider robot adoption

Service-price ceilings and charging rules limit how much public hospitals can charge, which can constrain equipment cost recovery. If a hospital cannot recover enough of the equipment's cost, it may be less willing to purchase or lease the platform.

Hunan, for example, allows local medical security authorities to set government-guided prices below the provincial ceilings, while public hospitals may charge below those local prices. Hospitals also **cannot separately charge for every function the same robot offers**. If one system performs functions across multiple robotic-assistance price items, hospitals can charge only the highest applicable price item rather than stack the charges.

They also **cannot combine robotic-assistance charges with surgical-path navigation or specified image-guidance charges**. Where a case would otherwise include a standalone navigation charge, the hospital cannot add the

robotic-assistance fee on top of that charge. For such an upgrade, the incremental permitted charge is the difference between the two charges, not the full robotic-assistance fee.

Local price-setting can also make adoption uneven across regions. **Suppliers may therefore need to target placements selectively**, since the same system can have different hospital cost-recovery economics under different local price levels.

Existing spine robots may see more use before hospitals add new systems

In the near term, the reform is more **likely to increase utilization of the installed base** rather than cause a nationwide increase in new system placements. Higher utilization of existing equipment does not require another capital acquisition. **Outright purchase is also not the only route to a new placement.** **TINAVI** and **Longwood Valley MedTech** both secured publicly disclosed leasing-based awards in H1 2026. Outright-purchase volumes alone are an incomplete indicator of new system placements.

Hospitals will also **need sufficient procedure volume, surgeon adoption, training, and operational capacity** to use the systems efficiently. Depending on local prices, payment rules, and case-level costs, the reform may improve the economics of robotic-assisted procedures. Where those conditions are weak, better procedure economics may still be insufficient to justify a new system placement.

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China's pricing **framework does not differentiate these price items by supplier origin**. Where a domestic and foreign robot qualify for the same medical-service price item, the hospital has the same permitted charge for either. If the reform creates more placements, those placements are still contested on the same billing basis. Domestic manufacturers already win most publicly disclosed awards in this market.

Systems from **domestic manufacturers accounted for 93% of awarded systems** in the publicly available H1 2026 procurement data. Awarded systems increased from 34 in H1 2025 to 44 in H1 2026. Total disclosed procurement value remained broadly unchanged at about RMB 258 million. Among projects with disclosed contract values, the estimated average procurement price declined from approximately RMB 8.9 million to just under RMB 7 million. The figures indicate that **more systems were awarded without a comparable increase in total procurement value**. However, this does not mean that foreign systems became cheaper. These figures do not represent total market sales or supplier revenue. Lease contract values cannot be directly compared with outright purchase prices. Price competition is just one factor among several driving lower average procurement estimates.

While these figures reflect orthopedic robotics broadly rather than spine-specific systems, they **highlight the competitive environment foreign suppliers face**. Hospitals already have multiple domestic alternatives, and more vendors are competing for the same capital budgets. This could make it harder for foreign robot suppliers to win new placements unless they offer clear advantages.

Domestic suppliers compete beyond upfront equipment price

Domestic suppliers are also **competing through procurement models**, not only equipment price. In H1 2026, leading tertiary hospitals in Beijing awarded all six publicly disclosed orthopedic-robot leasing projects to TINAVI and Longwood Valley MedTech, both Chinese companies. Given these hospitals' strong purchasing capacity, the **leasing arrangements appear to reflect procurement and capital-allocation preferences**. They do not appear to reflect simply an inability to fund an outright purchase. This gives domestic suppliers another way to compete for large tertiary-hospital accounts without relying only on upfront equipment pricing.

That competition is not limited to procurement terms. TINAVI's TiRobot supports procedures across the full spine and has been used in more than 200 medical institutions. TINAVI therefore provides at least one example of a domestic supplier with broad spine coverage and an established hospital footprint. Its competitive position is not based only on price or financing. For foreign suppliers, this means **broad procedural coverage alone may not be a strong differentiator**.

Integrated spine platforms may gain more from China's robot fees

Medtronic provides one example of a different competitive approach. Its AiBLE ecosystem connects pre-operative planning, imaging, navigation, robotics, surgical technologies, and implants within one spine workflow. In its global business, Medtronic has reported implant pull-through associated with AiBLE. This shows how greater use of an integrated enabling-technology platform can also support the supplier's implant business. Whether the same effect occurs in China is less clear.

Once a hospital installs a platform, the incumbent can have an advantage in later replacement or expansion decisions. Switching systems may require retraining and workflow changes. If the pricing reform increases use of existing platforms, greater workflow familiarity can reinforce that installed-base advantage.

The link to implants is less direct. Under VBP, hospitals commit part of their expected implant demand to selected products and are expected to complete those agreed volumes. Platform use therefore cannot automatically redirect implant purchases to the platform supplier. Any implant pull-through also depends on whether that supplier's implants are selected under VBP and how much demand remains outside the committed volume. There is limited evidence that Medtronic's robotics or navigation increases its share of a hospital's implant purchases in China. The same distinction applies to other integrated suppliers. Greater platform use can strengthen their installed-base position, while implant pull-through still depends on their position in VBP procurement.

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China's pricing design limits the direct billing value of feature breadth. If a hospital rarely uses a capability in procedures qualifying for higher-priced medical-service price items, that capability adds little direct pricing value. For hospitals, this makes expected use across their own case mix more important when deciding whether a premium platform is worth the extra cost.

A higher-priced platform can still justify its cost without a higher service charge if it produces measurable clinical or operating gains. In spine surgery, those gains may include better screw-placement accuracy, fewer revisions, or lower radiation exposure. Because these results vary across systems and hospital settings, the premium case has to be made at the individual hospital level. Suppliers need to show that the expected gains at that hospital's utilization and workflow are large enough to offset higher acquisition and operating costs. The

same platform may therefore justify a premium at one hospital but not another. This raises the evidence burden for premium platforms where hospitals have lower-cost domestic options for the same planned procedures.

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The procurement data point to a second constraint on supplier economics. Publicly disclosed award volume increased by 29.4% year on year in H1 2026. The number of manufacturers securing awards increased from 11 to 16 and total disclosed procurement value remained broadly flat. The placement opportunity therefore expanded alongside a broader competitive field, without a comparable increase in disclosed procurement value. If the new price items eventually support more system placements, suppliers could still see equipment revenue grow more slowly than placement volumes. This can happen if average procurement value per system remains under pressure.



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