

POLICYBRIEF

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From Hospital Websites to Digital Health Service Platforms: Policy Priorities in Ecuador, Greece, Malaysia, and Portugal

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Highlights

1. **Hospital websites are technically stronger than they are service-oriented.** Across Ecuador, Greece, Malaysia and Portugal, Technology Features is the strongest criterion, while Services is consistently the weakest.
2. **Online service provision is the main policy gap.** Even the best-performing country in Services, Portugal, reaches only 0.246 on a 0-1 scale.
3. **Transparency through quality metrics remains underdeveloped.** Hospitals rarely publish waiting times, available beds, admissions, infection rates, mortality indicators, or patient satisfaction results.
4. **Digital maturity differs across countries.** Portugal presents the most balanced performance; Malaysia and Greece show strong technical foundations; Ecuador is at an earlier stage.
5. **Policy action should shift from having a website to delivering digital health services.** The next phase should focus on patient-centred services, accessibility, transparency, and participation.

1. Introduction

Hospital websites have become essential elements of modern health systems. They are no longer only institutional communication tools; they are digital entry points through which patients search for information, access services, interact with hospitals, and make decisions about their healthcare.

In a context where citizens increasingly expect public and private services to be available online, hospital websites can reduce administrative burden, improve access to reliable health information, support patient empowerment, and strengthen institutional transparency.

The Health Online Service Provision Index (HOSPI) provides a structured tool for assessing hospital websites. It assesses websites across four criteria: Content (C), Services (S), Community Interaction (CI), and Technology Features (TF) (Table 1).

This policy brief draws on HOSPI applications in Ecuador, Greece, Malaysia, and Portugal. The comparison should be interpreted with caution because the studies differ in year, sample, context, and, in some cases, in the instrument version.

Nevertheless, the results reveal a consistent policy message: hospital websites across different health systems tend to

perform better as information and communication platforms than as fully developed digital service platforms. The policy challenge is therefore not simply to improve website design, but to transform hospital websites into trustworthy, accessible, and service-oriented digital health gateways.

2. Assessment Approach

The evidence considered in this brief is based on comparative HOSPI results for four countries (Figure 1) . The assessment uses a 0-1 scale, where higher values represent stronger performance. Portugal (2023), Greece (2022), Malaysia (2023), and Ecuador (2023) assessed 102, 245, 107, and 159 hospital websites, respectively. Because the assessments were conducted across different contexts, the comparison is best understood as a policy-oriented diagnosis rather than a strict ranking. It identifies common patterns, priority gaps, and country-specific improvement paths.

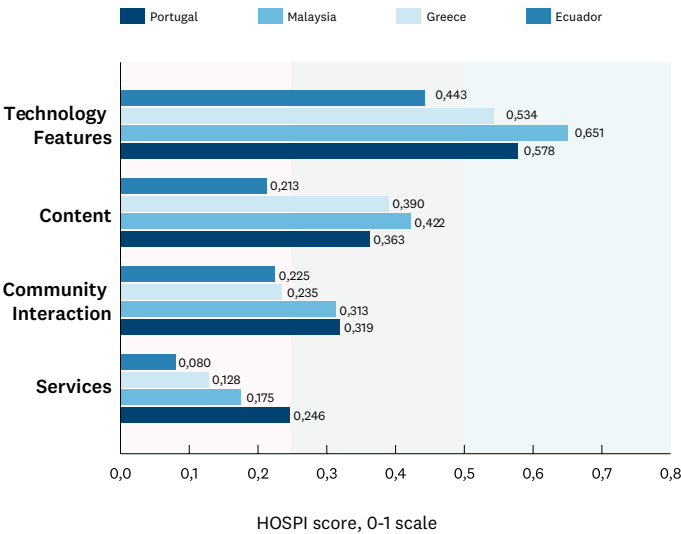
Criterion	What it assesses	Policy relevance
Content	Institutional information, quality metrics, medical information, patient information, research and teaching.	Supports transparency, informed choice, patient support, and public trust.
Services	Administrative procedures, appointments, patient care tools, telemedicine, prescriptions, and access to records.	Turns a website into a digital health service platform.
Community Interaction	Participation tools, media, public relations, feedback, virtual tours, and social media engagement.	Creates dialogue, accountability, and user-centred service improvement.
Technology Features	Navigability, accessibility, usability/readability, credibility, privacy, and security.	Provides the technical basis for safe and inclusive digital health services.

Table 1. HOSPI criteria and policy focus

3. Results and Findings

The comparison shows a clear hierarchy across criteria (Figure 1). Technology Features is the strongest area in all four countries. Services is the weakest criterion in every country. Content and Community Interaction sit between these two poles, showing moderate but uneven development.

Cross-country hospital website performance by HOSPI criterion



TF: Strongest criterion in all countries; Malaysia and Portugal lead.

C: Malaysia leads; Greece and Portugal follow; Ecuador is clearly behind.

CI:Portugal and Malaysia are close; Greece and Ecuador lag

S: Weakest criterion everywhere; Portugal is best, but still low.

Figure 1. Cross-country performance by criterion

The main finding is that hospitals have generally invested more in websites that can be navigated and trusted than in websites that provide end-to-end digital services. Patients can often find basic information, but they are less likely to complete administrative procedures, manage appointments, access records, renew prescriptions, or communicate digitally with health professionals.

4. Country Profiles

<p>Portugal</p> <p>Portugal shows the most balanced performance among the four countries. Its strongest area is Technology Features, followed by Content and Community Interaction. Portugal has the best Services score among the four countries, but this criterion remains weak. Patient care services are particularly underdeveloped, and quality metrics are limited. Portugal's case shows that even relatively mature hospital web systems need to move further toward patient-facing digital services and transparency. Overall, private hospital groups tend to outperform public hospitals.</p>	<p>Greece</p> <p>Greece performs well in Technology Features. Navigability, privacy and security, accessibility, usability, readability, and credibility are all comparatively strong. Greece has a public-sector advantage in overall website completeness, and larger hospitals tend to perform better. However, Services is a major weakness, especially patient care. Greece, therefore, has a technical foundation that could support stronger digital services, but this potential has not yet been translated into patient-facing online functionality.</p>
<p>Malaysia</p> <p>Malaysia has the strongest Technology Features score among the four countries. Navigability, privacy and security, and usability/readability are especially strong. Content is also relatively solid for basic institutional, patient, and medical information. However, Malaysia performs weakly in quality metrics, appointments, patient care, research and teaching, participation, and media. The top performers are dominated by private and university hospitals, suggesting that public hospitals may require additional support, incentives, and standards.</p>	<p>Ecuador</p> <p>Ecuador is at an earlier stage of hospital website maturity. Technology Features is its strongest criterion, but even this remains below the level of the other countries. The Services criterion has an extremely low score, and Content and Community Interaction are also weak. The top 10 hospitals are private and geographically concentrated, suggesting potential inequality in digital health access. Ecuador's priority could be to establish minimum national standards for hospital websites before expanding toward more advanced services.</p>

Across the four country profiles, the main policy lesson is that digital health maturity cannot be inferred from the technological quality of the website alone. A navigable and credible website is necessary but not sufficient. Digital transformation in healthcare requires the ability to complete meaningful health-related transactions online.

5. Policy Recommendations

The following recommendations are intended for ministries of health, hospital management, digital government agencies, regulators, and hospital associations. They are applicable across countries but should be adapted to national priorities, maturity levels and institutional capacity.

<p>1. Establish minimum national standards for hospital websites</p> <ul style="list-style-type: none"> Define the essential information and services that every hospital website must provide. Include contact information, location, departments, specialties, medical staff information, patient rights, admission and discharge guidance, payment information, emergency information, and information for foreign or vulnerable users. Use national templates where variation across hospitals and regions is high. 	<p>2. Prioritise Services as the next phase of digital health transformation</p> <ul style="list-style-type: none"> Move from static information portals to transactional and interactive platforms. Prioritise online appointment booking, appointment cancellation, digital admission procedures, online forms, prescription renewal, test results, patient portals, telemedicine, and secure communication with professionals. Ensure that public hospitals receive the technical and financial support required to implement these services.
<p>3. Mandate transparency and quality metrics</p> <ul style="list-style-type: none"> Publish standardised indicators on waiting times, available beds, admissions, surgical activity, infection rates, mortality indicators, emergency department indicators, patient satisfaction, and complaint resolution. Update data regularly and present it in formats understandable to patients and reusable by researchers and policymakers. Use transparency to support accountability and learning across hospitals and regions. 	<p>4. Improve accessibility and inclusive design</p> <ul style="list-style-type: none"> Require compliance with recognised accessibility standards and mobile-responsive design. Treat accessibility as a core requirement from the beginning rather than an advanced feature added later. Provide alt text for images, text resizing, contrast options, keyboard navigation, readable language, and multilingual access where relevant.
<p>5. Strengthen Community Interaction and feedback mechanisms</p> <ul style="list-style-type: none"> Create channels for users to communicate with hospitals and participate in service improvement. Use feedback forms, complaint mechanisms, patient surveys, FAQs, newsletters, virtual tours, public relations contacts, and moderated social media links. Connect community feedback to internal service improvement processes. 	<p>6. Create governance and monitoring mechanisms</p> <ul style="list-style-type: none"> Define responsibilities for website content, service integration, data protection, accessibility, and regular monitoring. Repeat HOSPI assessments periodically to track progress over time. Promote peer learning across countries and hospital types, using stronger performers as examples of good practice.

6. Country-specific Policy Priorities

<p>Portugal</p> <p>Deepen digital service maturity through patient portals, telemedicine, access to records, prescription renewal, and digital administrative transactions. Strengthen quality metrics and media-related community interaction.</p>	<p>Greece</p> <p>Transform strong technical websites into service platforms. Introduce a national hospital website template, minimum service standards, online appointments, digital forms, prescription renewal, patient-care services, and access to records.</p>
<p>Malaysia</p> <p>Reduce the gap between technical strength and patient-facing services. Support public hospitals in improving appointment management, patient portals, quality metrics, accessibility, community interaction, and research and teaching information.</p>	<p>Ecuador</p> <p>Build the foundations of reliable hospital web presence. Introduce a national minimum standard covering content, patient information, quality metrics, contact information, accessibility, and basic services before scaling to telemedicine and patient portals.</p>

7. Concluding Remarks

The comparative HOSPI results reveal a shared digital health challenge. Hospitals in Portugal, Greece, Malaysia, and Ecuador have made progress in creating technologically functional websites, but most have not yet developed full digital service platforms. The strongest criterion in all countries is Technology Features, while Services remains the weakest. This imbalance matters because patients do not only need websites that are easy to navigate; they need websites that allow them to access care, manage appointments, communicate with professionals, obtain reliable information, and understand hospital performance. The next phase of

hospital website policy should therefore focus on patient-centred service delivery, transparency, accessibility, and participation. Governments and health sector management should define minimum standards, invest in online services, publish quality metrics, improve accessibility, and create feedback mechanisms. Hospital websites should be treated as part of core health infrastructure. When properly designed and governed, they can reduce administrative burden, improve patient experience, strengthen trust, and support more transparent and equitable health systems.

SOURCES

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