

Optimising the Future of GCC Healthcare

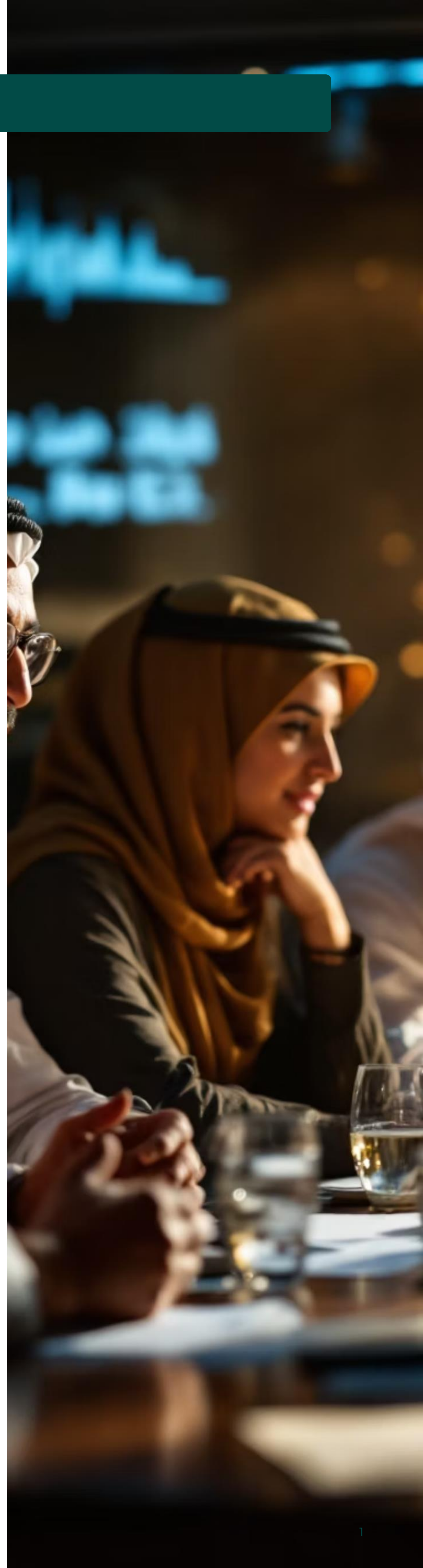
How Bahrain's Data-Driven Model Can Redefine Value-Based Healthcare Reform

A Message from Mark Gordon, CEO, Health System Intelligence

Across the Gulf, including in Bahrain, health leaders recognise the urgency of change. They understand that simply spending more or building more is not enough. They have embraced the challenge of transformation but are still at a crossroads as to how to deliver it in a way that is fiscally sustainable, operationally efficient, and clinically excellent.

That is precisely why Bahrain was selected as the subject of our research paper, "Accelerating Healthcare Optimisation in the GCC". Its size, policy readiness, existing insurance mechanisms, and the presence of a mixed provider landscape make it an ideal environment to explore how Universal Health Insurance (UHI) can be designed, not just rolled out. And crucially, the leadership in Bahrain is already asking the right questions having commissioned Health System Intelligence (HSi) to start some of this national reform integrating the Royal Medical Services hospitals in IT system, workforce, costing, financial projecting and operational improvement.

Our research has gone one step further. It takes a wider view of the whole system and what has emerged is not just a clearer picture of today, but a data-rich roadmap for tomorrow. Bahrain has the opportunity to lead - not only by implementing UHI, but by doing so with foresight, control, and confidence.





They have embraced the challenge of transformation but are still at a crossroads as to how to deliver it in a way that is fiscally sustainable, operationally efficient, and clinically excellent.

This report is the summary of our dedicated research and is part of our ongoing commitment to sharing actionable insights with healthcare leaders in Bahrain, the GCC and globally.

The real question is clear. It is no longer whether predictive, demand-led planning works. The real question is whether we can afford to not adopt the HSi predictive population-based approach before ageing populations and financial strain make the window of opportunity harder to seize.

This report sets out the case for that future and the strategy to make it real.

Mark Gordon
CEO, Health System
Intelligence



1. The Situation Today

You'd think with more money, more hospitals, more staff, and more data, healthcare systems would be thriving. But that's not always what we see - not in the West, not in the Gulf - even in places where political will and reform agendas are strong.

As our example of the GCC and like many healthcare systems in the Gulf, Bahrain isn't failing. It's evolving. And this report isn't a critique; it's a reflection of where Bahrain is today, where it could be tomorrow, and how its leadership is already moving in the right direction.

In Bahrain, the system is complex, resource-rich, and policy-driven. The question is: what's needed to deliver care effectively, and sustainably, for this population?

This report is not just an audit of the system, but a way to **reframe the conversation**: what would it look like if Bahrain's healthcare system were completely rebuilt around actual, forecasted clinical need? What happens when we model demand - not based on last year's activity, but on predictive, population-level health drivers?

Benchmarking the Bahrain Healthcare System: Current vs Optimised

Item	Population	Episode Productivity	Assets & Infrastructure	Workforce	Budget (BD)	Capitation Rate (BD)
Current	501,894	2,221,323	2,743	10,776	423,894,453	844
Optimised	501,894	2,916,761	1,855	4,696	210,960,335	521

(Source: HSi Insight™ – Bahrain Modelling Stage 1-5)

*The reality is this: The system is **highly resourced**, perhaps even over-resourced, but not always in the right areas.*

1. The Situation Today

The impact is significant

Our research proves there is significant potential to **increase productivity, reduce costs, and maintain or improve care quality** by aligning system inputs with actual population need.

50.3%

Reduction in budget

695,438

More clinical episodes
delivered

We're not talking about cuts. We're talking about smart redesign.

Understanding Where the Waste Sits

Overstaffing

Government-funded hospitals are currently employing 10,776 healthcare professionals. The optimised requirement? Just **4,696** for the same population. That's an excess of 6,080 FTEs, **an overhead of over 55%.**

Overbuild

The system currently operates with 2,743 infrastructure units. The **optimised demand model only requires 1,855**, a surplus of 888 facilities/assets, many of which are underused operating theatres and tertiary care beds.

Overspending

The government currently spends BD 423M annually on this system. The **optimised spend is BD 211M, a potential immediate saving of BD 212M per year.**

1. The Situation Today

Are We Getting Value for Money?

The shift to an evidence-based capitation rate of **BD 521** would slash spending without reducing quality because **the demand model *right-sizes the system***. Compare that to Dubai’s 2022 capitation rate of BD 470 (USD \$1,276), and Bahrain’s target is not just realistic, it’s conservative.

Payer Entity	Beneficiaries	Expenditure (BD M)	Per Capita Cost (BD)
Government	501,894	423	846.79
Insurers	217,439	180	827.81
Combined	719,333	603	841.05
Optimised Rate	—	—	521

What’s Actually Driving the Cost Bloat?

- 1

Planning the past
Planning based on past activity not future need.
- 2

No universal pricing structure
Or unified provider contracts.
- 3

Underused supply chain intelligence
With procurement volumes driving up unit costs.
- 4

Lack of system-wide standardisation
From revenue cycle management to medical job planning.
- 5

Excessive variation in clinical pathways
Leading to longer length of stay (LOS), unnecessary investigations, & treatment duplication.

1. The Situation Today

Why the GCC Still Has a Window of Opportunity



The policy direction is right

UHI is coming (and is coming or already here in the rest of the Gulf)



The infrastructure already exists



The population is young

Meaning there's time to prepare for the demographic shift.



There is strong political will to change

Most importantly, like many GCC healthcare systems, Bahrain is **not burdened with the challenges of legacy systems** buried under historical baggage. Bahrain can lead with intention.

The HSi Insight™ model proves that with the right data, the future doesn't have to be expensive, fragmented, or chaotic.



The next step?

Understanding how Bahrain's system is uniquely positioned to make this leap

2. A System Ready

If you wanted to design the perfect testbed for next-generation healthcare planning, you'd describe something close to Bahrain. It's compact, with a population of just over 1.5 million. It already has a mixed health system: government, private, military. There's a functioning private insurance market. And importantly, the country's leadership has a clear vision for healthcare improvement: Universal Health Insurance (UHI), for both citizens and expatriates.

This isn't about starting from scratch. It's about optimising what already exists. And doing it based on real need, not institutional habit.

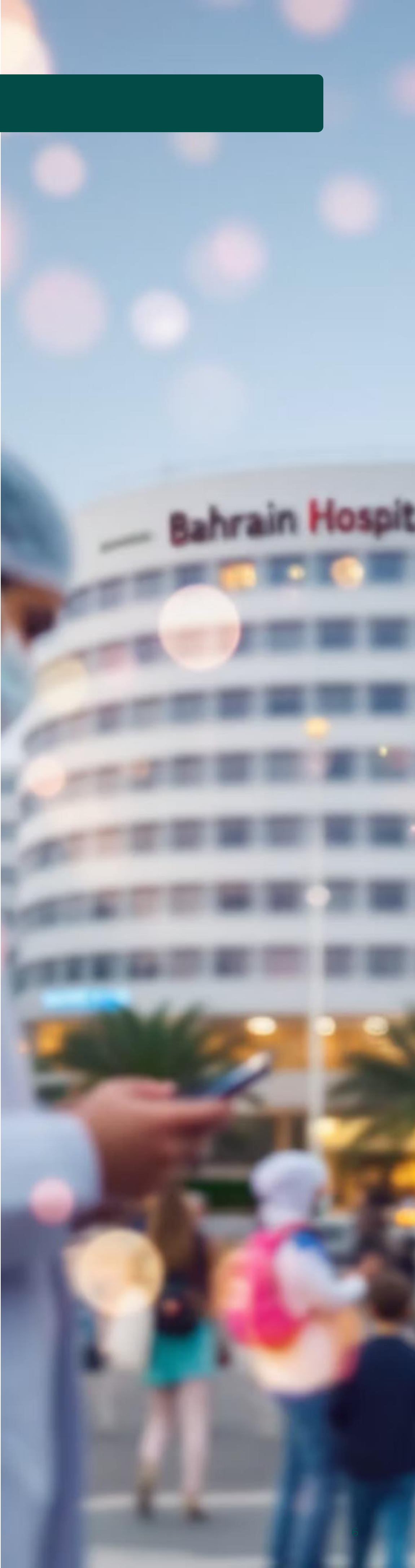
What Is the True Health Demand in Bahrain?

Using predictive AI modelling, HSi Insight™ mapped the current and five-year forecasted demand across every health system pillar: productivity, infrastructure, workforce, and finance.

Here's what the model shows for the **entire Bahrain population (Bahrainis + expats)**:

Year	Population	Episode Productivity	Assets & Infrastructure	Workforce (FTEs)
2024	1,543,893	8,561,131	5,428	13,552

Income (BD)	Budget (BD)	Capitation Rate (BD)
779,263,220	595,191,434	518



2. A System Ready

Now compare that to the **Bahraini citizens only**:

Year	Population	Episode Productivity	Assets & Infrastructure	Workforce (FTEs)
2024	719,333	4,149,499	2,624	6,617

Income (BD)	Budget (BD)	Capitation Rate (BD)
374,545,374	295,168,477	521

And five years into the future?

Our research mapped the changes from 2025 - 2029, showcasing the huge impact of adopting a different approach.

Year	Population	Episode Productivity	Assets	Workforce	Income (BD)	Budget (BD)	Capitation
2025	725,807	4,186,143	2,624	6,674	378,296,908	296,293,802	521
2026	732,339	4,223,113	2,671	6,731	381,662,747	298,804,237	521
2027	738,930	4,260,420	2,694	6,791	385,058,879	301,332,401	521
2028	745,581	4,298,060	2,719	6,850	388,485,576	303,891,141	521
2029	752,291	4,336,041	2,741	6,909	391,943,114	306,452,147	521

Whether today or five years from now, **Bahrain can meet its entire population’s healthcare needs with fewer assets, less spend, and a focused workforce - if optimised correctly.**

2. A System Ready

Government vs Insurer Spend: The Real Cost of Healthcare in Bahrain


The current combined spend of government and insurers across the 719,333 Bahraini citizens is **BD 603 million**, averaging **BD 841.05 per person**.

Payer Entity	Beneficiaries	Expenditure (BD M)	Per Capita Cost (BD)
Government	501,894	423	846.79
Private Insurers	217,439	180	827.81
Combined Total	719,333	603	841.05

Under an optimised, UHI-ready system, **BD 521** per person would be sufficient, cutting waste without cutting care.


That's a **potential 38% saving** on current spend - without compromising on productivity or quality.

Why Bahrain Is Uniquely Positioned to Act Now




Policy Clarity

Bahrain has declared its intention to roll out UHI - not in theory, but in practice. The timing is ideal to base implementation on predictive modelling rather than reactive correction.




Manageable Size

At under 2 million people, Bahrain's system is agile enough to pivot quickly, test reforms, and scale proven models across the GCC.



Mixed Market

With public, private, and military providers already in place, Bahrain can test contracting models, provider performance incentives, and pricing reforms in a live environment.



Digital-Ready

The infrastructure required to run advanced analytics and predictive AI already exists - no major overhaul needed. What's missing is the adoption of a new operating logic.

Introducing HSi Insight™

Predictive Modelling Redefining What's Possible

If healthcare is the most complex system in government, then planning its future requires more than spreadsheets, dashboards, or reactive policy levers. It requires clarity. Not just at the headline level, but deep within the infrastructure of the system: clinical pathways, asset utilisation, staffing ratios, capitation pricing, and demand distribution.

That's where most systems falter. They can measure what happened. They can forecast loosely. But they can't see what's truly needed - until now, as shown in Bahrain.

Like other healthcare systems, Bahrain is facing challenging decisions. But having already commissioned HSi, Bahrain is now one of the first in the GCC to have used predictive intelligence to shape a part of its system. It is showing what's possible when reform is built on insight, not instinct.

The path is now visible. The model exists. The tools are in place.

HSi Insight™: Your Key Questions Answered in Real-time

- | | |
|---|--|
| 1 What clinical demand will we face in 12 months? In five years? | 2 How many nurses, anaesthetists, or radiographers will that require? |
| 3 What's the infrastructure footprint needed to deliver care safely and efficiently? | 4 What will it cost - and how can it be funded sustainably? |

This isn't dashboarding. This is predictive, integrated system modelling at national scale.



What Makes our Approach Different?

Shifting the focus

Most health systems rely on retrospective data. They build next year's budgets based on last year's usage. They build capacity based on averages. They set pricing based on political compromise, not economic or clinical necessity.

That approach leads to underused hospitals, overspent budgets, and overstretched workforces.

We change that logic.

A Living System, Not a One-Off Exercise

What makes HSi Insight™ especially powerful is that it's not a static consultancy report or one-time diagnostic. It's a **continuously updating platform** that tracks progress and recalibrates based on actual system performance against predictive benchmarks.

Leaders can see:

- Whether **actual activity** is aligned to **modelled demand**.
- Where variation is emerging - and **what it means**.
- What future pressure points are forming - **before they become crises**.

We use HSi Insight™ to analyse, predict, plan and integrate:

1 Population health need

Based on epidemiology, age profile, risk stratification.

2 Episode productivity

What care needs to be delivered, by specialty and acuity.

3 Asset and infrastructure modelling

Number, type, and location of facilities.

4 Workforce mapping

Aligned to actual clinical throughput, not static ratios.

5 Financial forecasting

Including capitation models, bundled pricing, DRGs, and universal cost architecture.

All in real time. As population needs evolve, the system evolves with them.

How HSi Insight™ Helps Decision-Makers Plan Smarter

For commissioners and funders, it supports:

- Capitation pricing linked to the real cost of delivery.
- Contracting based on actual need, not historical service levels.
- Identification of where services should be expanded, reduced, or redirected.

For providers, it means:

- Clarity on future case mix and demand volumes.
- Alignment of workforce planning to actual episode volume.
- Data-led justification for investment, reallocation, or restructuring.

For governments, it means:

- Reduced fiscal pressure by preventing overspend.
- Better health outcomes through system-wide coherence.
- The ability to manage public expectations with transparency and confidence.

*In a world where healthcare transformation is often reactive, HSi Insight™ gives leaders **proactive, continuous oversight.***



3. The System We Actually Need

When systems are built on evidence, you don't have to choose between efficiency and compassion.

What makes a healthcare system truly sustainable? It's not just the money spent, or beds built. It's how well capacity, cost, and clinical need are aligned.

Overcapacity in one place, underinvestment in another. Excess workforce in some areas, while others go understaffed. That's not bad intent - it's bad insight.

In Bahrain, however, the opportunity is different. Our predictive modelling shows not just where the inefficiencies lie, but what the right-sized system could - and should - look like.

Infrastructure: Right-Sizing the Physical Footprint

Assets Maintained	2,743
Assets Required	1,855
Reduction	888 units

Instead of scaling down indiscriminately, this model helps policymakers:

- Identify surplus infrastructure for potential consolidation or repurposing.
- Plan new facilities based on demand growth patterns.
- Phase capital investment intelligently, not reactively.

It moves planning from guesswork to system stewardship.



3. The System We Actually Need

Balancing Staff to Clinical Demand

Perhaps the most striking figure: the government hospital workforce today includes **10,776 FTEs**, while the model shows the optimal figure to be **4,696**.

That's an excess of **6,080 FTEs** - more than 55%.

This isn't about mass layoffs. In fact, it's the opposite. It's a chance to:

- Reassign and retrain staff toward high-need areas.
- Develop capacity for expanded primary, community, or mental health services.
- Introduce precision into workforce planning cycles and recruitment.

It allows the workforce strategy to be designed around service delivery - not historical headcounts or union ratios.

Capitation that Reflects True Demand

System	Annual Spend (BD)	Population	Capitation Rate (BD)
Government + Insurer (current)	603 million	719,333	841.05
Optimised	295–306 million	719,333	521

A shift to **BD 521 per capita** across the full population means Bahrain can achieve:

- UHI rollout without destabilising public finances.
- Better control of health inflation.
- A platform to introduce outcome-based reimbursement and bundled pricing.

Importantly, this capitation rate is not arbitrarily reduced - it is evidence-based, **backed by precise clinical throughput and cost analytics**.

3. The System We Actually Need

Matching Demand to Capacity

Across health systems globally, the typical question is: “How much can we do with what we have?”

With predictive intelligence, we ask something smarter: “**What should we have, to do what’s truly needed?**”

The Shift

That small change in question creates a massive shift in strategy. It leads to:

- More efficient care pathways.
- Standardised protocols that reduce length of stay.
- Reduced duplication of diagnostics or consults.
- Investment in services that match population risk profiles (e.g. cardiovascular, diabetes, ageing care).

The Result

By aligning infrastructure, workforce, and spending with population health need:

- The patient experience improves - because care is more accessible and more timely.
- Staff experience improves - because teams aren’t spread thin or mis-deployed.
- Financial stress on the system eases - because waste is engineered out before it builds up.

This isn’t about cost-cutting. It’s about **care-centred design** - but done with **full fiscal intelligence**.



Getting UHI Right

Why Modelling Before Implementation Matters

Universal Health Insurance is a powerful lever for change - but only if it's priced, planned, and governed with precision.

Bahrain is at the threshold of this transition. The leadership has laid the policy foundation. The private insurance market exists. There is already a mixed-provider ecosystem. The challenge now is one of execution: How to fund, contract, and deliver UHI in a way that doesn't just duplicate existing inefficiencies - but actively prevents them.

UHI has become the centrepiece of healthcare reform across the GCC, and rightly so. It promises to shift systems from supply-driven to demand-driven, from fragmented to accountable, and from generalised to value-based. But its success hinges on one critical factor: Whether it is implemented based on what the system truly needs, not what is politically palatable or administratively convenient.

The Risk of Rolling Out Blind

- 1 Overinflated capitation rates** based on outdated cost assumptions.
- 2 Uncontrolled provider variation,** leading to fragmented care and cost escalation.
- 3 Underprepared regulatory bodies,** unable to govern pricing, outcomes, or delivery consistency.
- 4 Financial shortfalls,** requiring emergency injections that undermine public trust.

In legacy systems around the world, from the NHS to Medicaid, UHI reform has sometimes meant centralising cost, not improving care.

Bahrain can avoid this by doing what most systems didn't: **Model first, then fund.**



What Decision-Makers Must Do Now

At this point, the direction is clear. The data is here. Now comes the hard part: **Insight into Action.**

For policymakers, ministers, commissioners, and funders, this next phase is not about discovering what needs to be done. It’s about **choosing to do it** and building the structures to support those decisions over time.

What’s needed now is a **systematic pivot**: from fragmented delivery to integrated governance, from reactive spending to predictive investment, and from short-term performance metrics to long-term value creation.

What Implementation Requires

This transition won’t happen overnight. But with the right sequencing, Bahrain can make real gains in under 12 months, and full system integration within 3–5 years.



Immediate Priorities

1 Establish a National Health Commissioner/Payer Function

Mandated to govern contracts, pricing, provider models, and outcomes measurement.

Uses real-time modelling (via HSi Insight™) to track population need and system performance.

Aligns UHI funding with predictive demand, not retrospective claims.

3 Rationalise Infrastructure and Workforce Based on Need

Use HSi Insight™ to identify surplus capacity and redeploy, restructure, or repurpose.

Prioritise high-impact investments based on five-year demand projections.

Support workforce strategy that matches clinical throughput - not legacy ratios.

5 Embed Predictive Oversight into System Governance

Integrate HSi Insight™ across all levels of planning, finance, and operations.

Require annual updates of demand models to reflect real-world changes.

Move from episodic audits to continuous system simulation and forecasting.

1

2

2 Adopt Population-Based Capitation as the Core Funding Model

Phase in a BD 521 per capita rate, with adjustments for risk, geography, and complexity.

Anchor public-private partnership (PPP) agreements to this unified benchmark.

Enable bundled payments and DRGs where care pathways are mature.

3

4

4 Standardise Clinical Pathways and Provider Contracts

Reduce unwarranted variation in care models, pricing, and outcomes.

Embed costed care bundles to streamline commissioning and increase transparency.

Introduce performance-linked incentives tied to outcomes, not just activity.

5

Beyond Reform

Healthcare reform isn't new. Reports have been written. Vision statements declared. Models trialled. But rarely do we see a system, like Bahrain, poised to act before the cracks widen, before the inefficiencies become irreversible, and before the costs consume the mission.

This modelling exercise, powered by HSi Insight™, has not just diagnosed problems. It has demonstrated what a health system, truly aligned to its population, can look like. It has made the invisible visible: the workforce gaps, the financial drag, the overcapacity, the duplication, the missed chances for value. But more importantly, it has laid out the solution - not abstract, not aspirational, but specific, actionable, and costed.

The real advantage isn't the modelling itself - it's what happens next.

And it's not just Bahrain. Others in the GCC - Saudi Arabia, UAE, Qatar - have a huge opportunity to go beyond ideas to actual tangible reform: long-term, sustainable healthcare transformation.

The Cost of Waiting

- **Every extra year** at the current spend rate means **over BD 200 million lost** in avoidable inefficiencies.
- **Every delay in capitation reform** allows **fragmentation and inflation** to take hold.
- **Every unmodelled policy** decision introduces **system stress** that could have been prevented.

Time doesn't just erode opportunity - it **entrenches inefficiency**.

The Power of Now

By moving with data in hand, Bahrain can:

- Build a universal health insurance model that is **fiscally viable, clinically grounded, and socially equitable**.
- Transition from reactive commissioning to **predictive governance**.
- **Set a regional and international benchmark** for evidence-led healthcare transformation.

This isn't just about healthcare. It's about **smart policy, well executed, improving lives**.

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