

Beamtree®

مركز التأمين
الصحي الوطني

Center for National Health Insurance



An internationally verified audit methodology
to identify opportunities for improvements
in casemix data quality and use in the
Kingdom of Saudi Arabia

PCSI, September 2022

The Kingdom of Saudi Arabia



The Kingdom of Saudi Arabia is a country on the Arabian Peninsula in Western Asia.

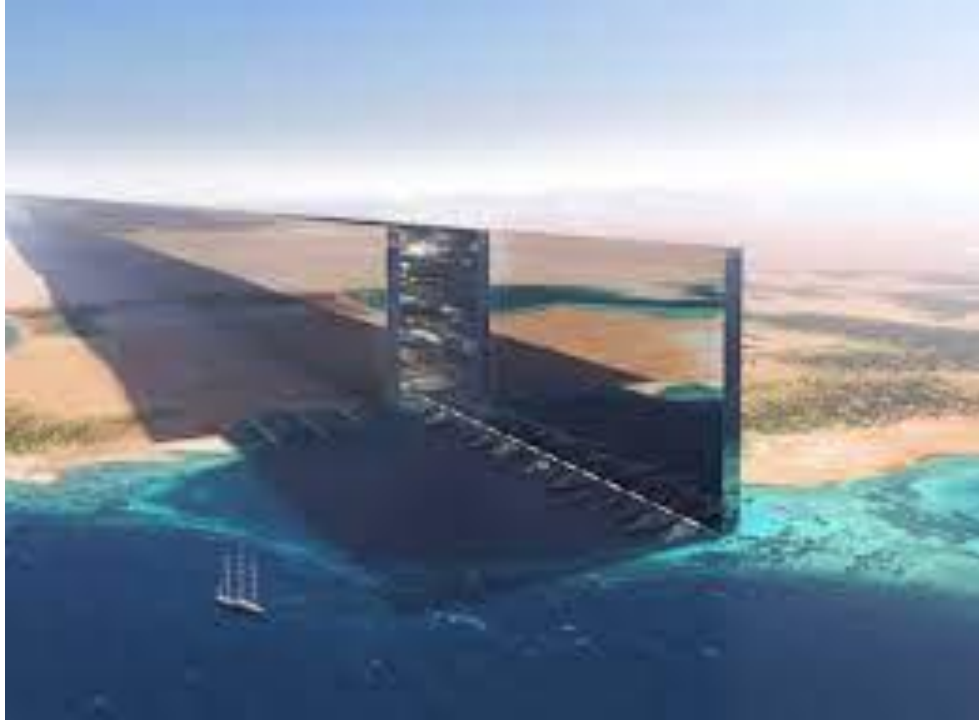
It has a land area of about 2,150,000 km² (830,000 sq mi), making it the fifth-largest country in Asia, the second-largest in the Arab world, and the largest in Western Asia.

Saudi Arabia's population is 34 million and its capital city is Riyadh.

The current life expectancy for Saudi Arabia in 2022 is 75.53 years.



KSA future



THE LINE is a civilizational revolution that puts humans first, providing an unprecedented urban living experience while preserving the surrounding nature.

It redefines the concept of urban development and what cities of the future should look like.



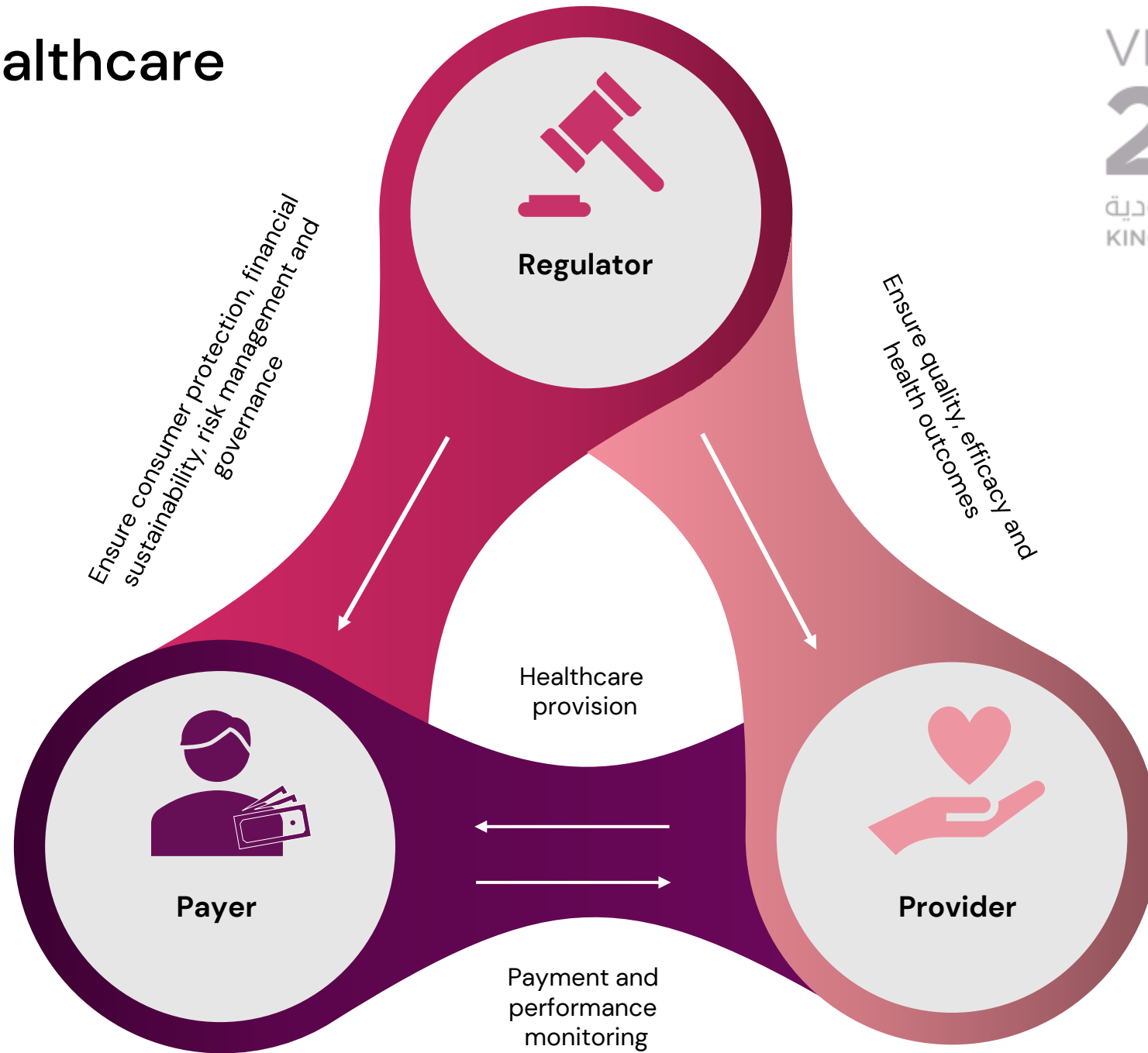
Vision 2030 healthcare transformation



“Our aim is a healthcare sector that promotes competition and transparency among providers. This will enhance the capability, efficiency and productivity of care and treatment, and increase the options available to our citizens.

We are determined to optimize and better utilize the capacity of our hospitals and healthcare centers.”

Vision 2030 healthcare transformation





CNHI Vision

To steer towards a sustainable health system that ensures quality health and care for all our beneficiaries

CNHI Mission

To design and establish a fit-for-purpose sustainable healthcare financing system capable of identifying the healthcare needs of the Saudi population and guiding the public and private provider market towards fulfilling them

CNHI Objectives

Improve Outcomes
Improve Sustainability
Improve Patient Satisfaction

CNHI Direction

Value driven funding model
Measure activity and clinical variation of care to support higher quality and better outcomes at the appropriate cost

Data quality importance for the payer

There is wide recognition of the importance of good quality coded clinical data and the fundamental role it plays in hospital management and funding of health services in the KSA healthcare reform

For a national payer, proactive measures are very important

- **National initiatives: portal, training, implementation of software**
- **Establishing a Coding & CDI function**
- **Development of first national external data quality check**
- **Plans for linking incentives to high quality data**

Realisation of interest of high-quality data

Clinical coding audit



Ensure a higher quality of patient activity data and other health/clinical information that underpins payments and provide recommendations and guidance for quality and processes improvement

Clinical documentation integrity



Ensure high accurate and complete clinical documentation and provide recommendations and guidance for quality and processes improvement

Clinical coding promotion



Promote classification and standards understanding and utilization and provide guidance to internal and external stakeholders

Journey towards high quality data

2018

First national MDS –
start national
patient activity
data reporting

2019

Guidelines,
framework and
scoring
methodology

2020

Pilot coding audit
and refining
the methodology
scoring

2021

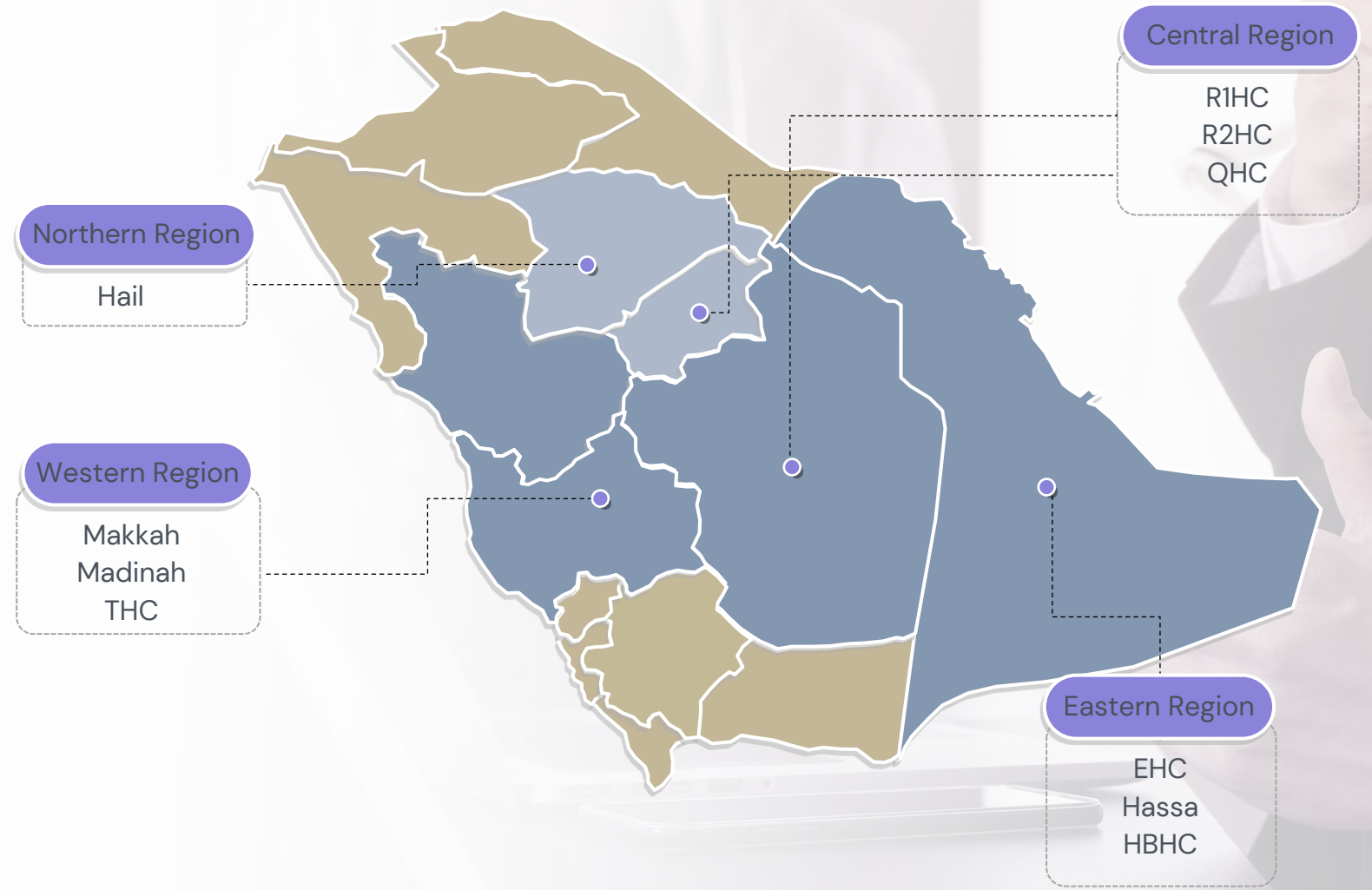
Baselining of coding
services
First national coding
audit across
Kingdom
regions

2022

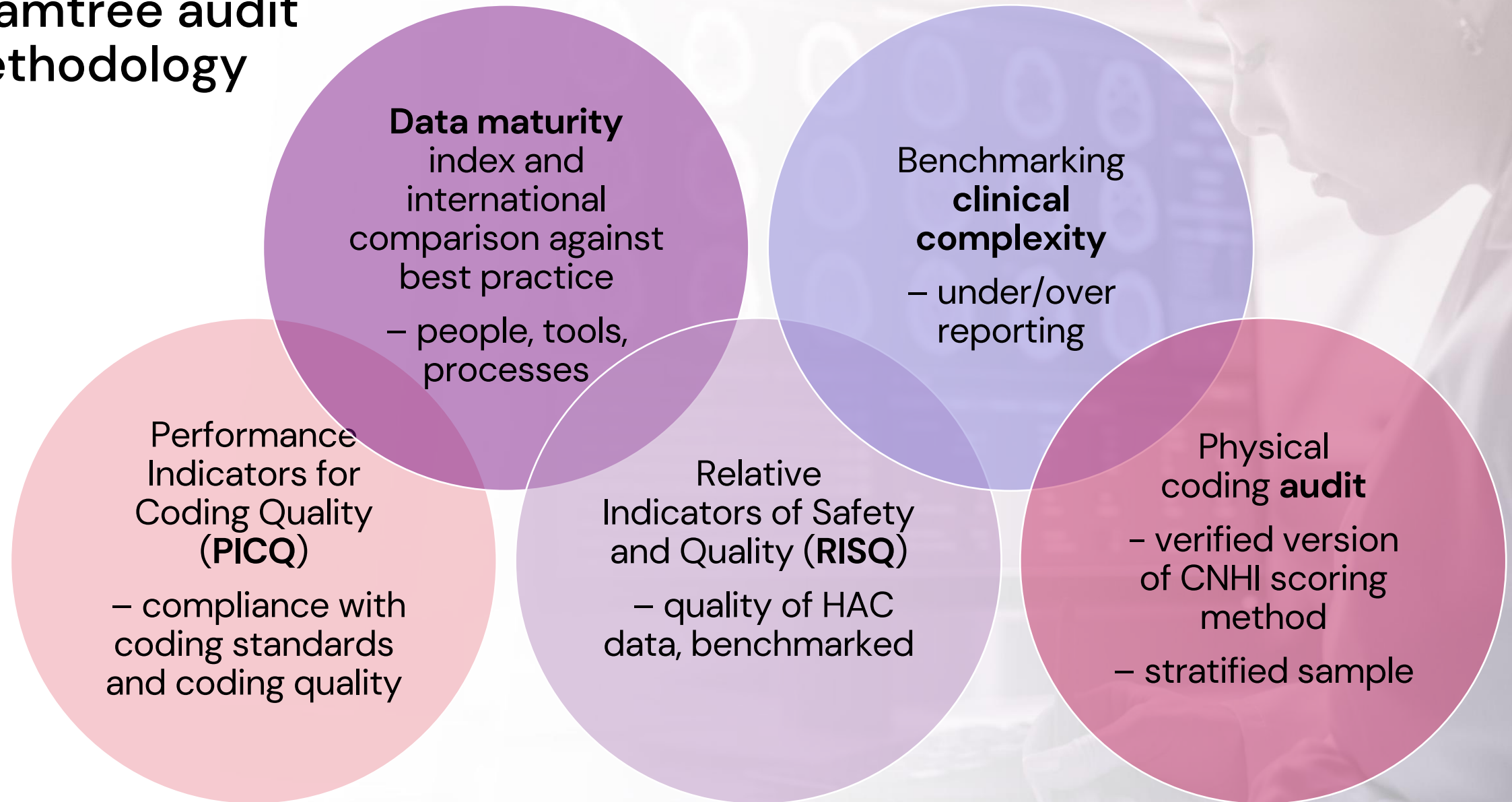
Robust coded data
Increase interest in
coded data
Structured regular
coding
audit

Project objectives

- Establish a baseline of coding services and quality of coded data
- Understand the status of coding services and readiness
- Provide national recommendations and guidance to enhance coding quality and accelerate implementation nationwide
- Support Vision 2030 goals



Beamtree audit methodology



Project elements

- Surveys and interviews
- Data collection
- Desktop data analysis
- Physical audit in KSA
- Remote audit from Australia
- Cluster education sessions
- Knowledge transfer workshops
- Reporting: hospital, cluster and national level



Recommendations

- Standardise outcome metrics and accurate measurement of resource costs
- Ensure a universal data taxonomy across diseases and population groups
- Ensure inter-operability that allows databases to efficiently communicate with each other
- Integrate outcomes data into the systems clinicians use in their daily work
- Link individual patient data across multiple databases
- Establish robust governance processes, with comprehensive rules for data access, agreements about data sharing and guidelines for managing privacy



TRANSLATE TO ACTION:

1. EXPERT EXTERNAL AUDIT OF CODING QUALITY
2. AUTOMATE AUDIT OF CODING
3. TRAINING
4. STANDARDS

Project outcomes and impact on KSA

- **Improved focus on coding quality and competencies in clusters and nationally**
 - Increased coder training and an improvement in data capture
- **CNHI is implementing the audit recommendations**
 - Expanded number of hospitals are now coding
 - Increase in hiring of coders across MOH hospitals
 - Clusters have a clear improvement plan for their coding workforce and data quality
- **National coding audit is prioritised**
 - Adoption of a continuous process to improve focus on coding quality, competencies, data quality and reliability

What does this mean in practice?



Number of providers initiated services after recommendations

Cluster X – Western Region

- **Before** Coding: 1 Provider
- **After** Coding: 15 Providers

Cluster X – Central Region

- **Before** Coding: 0 Providers
- **After** Coding: 9 Providers

Cluster X – Northern Region

- **Before** Coding: 0 Providers
- **After** Coding: 5 Providers

Cluster X – Eastern Region

- **Before** Coding: 3 Providers
- **After** Coding: 7 Providers

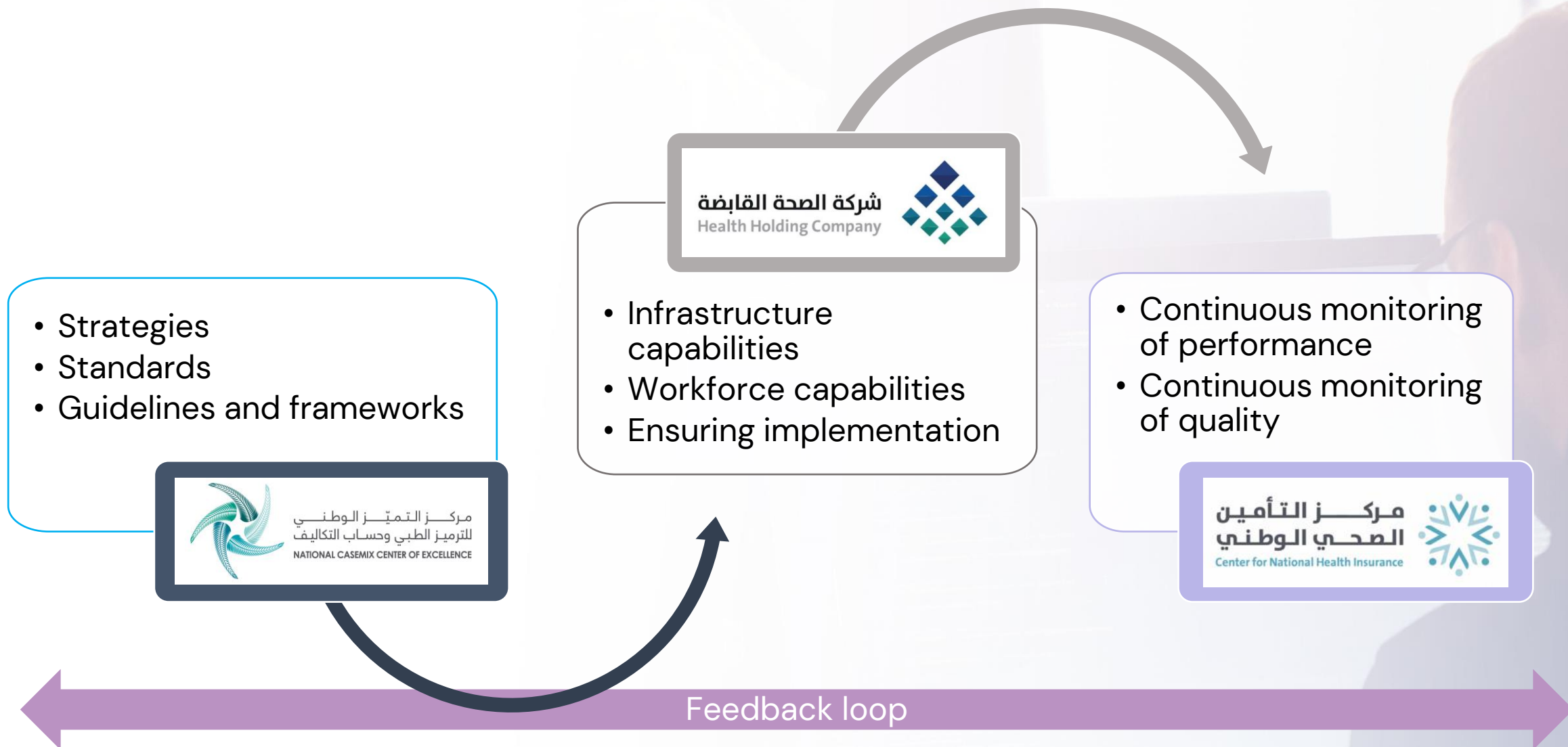
Cluster X – Central Region

- **Before** Coding: 2 Providers
- **After** Coding: 6 Providers

Cluster X – Central Region

- **Before** Coding: 4 Providers
- **After** Coding: 8 Providers

Established governance for improving quality



Conclusions

- Undertaking a focused study on the underlying quality of casemix data can build trust in and increase the usefulness of administrative data
- This requires leadership at national level in collaboration with technical specialists
- Actions must include changes in:
 - Changes in workforce, governance, standards and analytics
 - Leadership and advocacy
- Use of nationally and internationally verified tools is helpful at national level and encourages learning and adoption

NATIONAL RECOMMENDATIONS

1. Data

- 1.1 Make the data important
- 1.2 Make the data transparent (access to all stakeholders)
- 1.3 Adopt one standard (count and code in a standard way)

2. Governance

- 2.1 Make one government body responsible for the rules and compliance

3. Operational performance

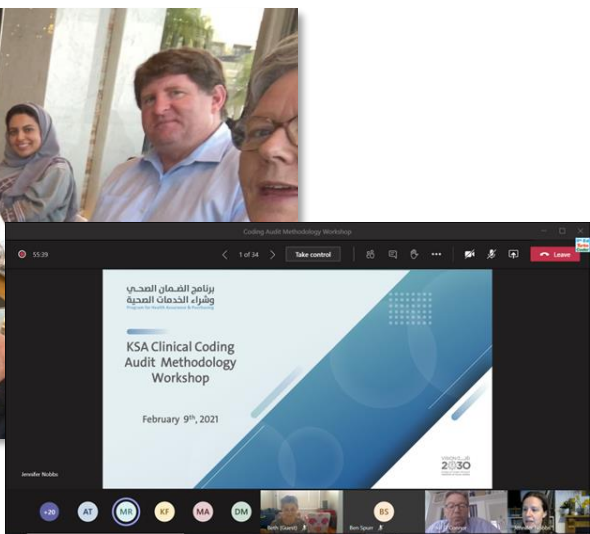
- 3.1 Create viable coding services; coding should be organised as a system not hospital-centric
- 3.2 Improve the coding process

4. Infrastructure support

- 4.1 Establish a national Coding Service Development Fund
- 4.2 Provide infrastructure support for coders

5. People

- 5.1 Invest in building the capabilities of the existing coding workforce
- 5.2 Make coders and their output valued
- 5.3 Estimate coder workforce requirements appropriately.



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