

Local Shadow billing implementation

Design of Local framework

www.chi.gov.sa

ضمان

مجلس الضمان الصحي
Council of Health Insurance



Contents

01

Phases and Deliverables

02

Shadow Billing Objectives

03

International Case studies

04

Key Considerations



AR-DRG implementation and Shadow Billing

WHAT IS OUR
VISION?

WHAT ARE OUR
OBJECTIVES?



“To be an international leader in prevention and improving value in health care services for the health insurance beneficiaries”

EVIDENCE BASED AND DATA DRIVEN POLICIES TO ENABLE MARKET AND PROTECT BENEFICIARIES

Our aim is to guide the sector towards the North Star

01

Data-driven &
evidence-based
policy design

02

Value-based health
care (VBHC)

03

Improve transparency
enable innovation
and promote efficiency



Project Objectives

Implementing foundations for the AR-DRG system across CHI to achieve sustainability and enable payers and providers to improve care services

Guidance

Support

Direction

Transparency in provision of care

Detailed understanding of the patient case-mix

Understanding of financial value of services provided

Clear Proof of patient outcomes

Workstream 1:
Project management and Governance


Workstream 2:
Standards review and recommendations


Workstream 3:
Clinical Coding & Documentation preparedness

Workstream 4:
AR DRG preparedness


Workstream 5:
Shadow billing implementation

Workstream 6:
Education and awareness of market on case-mix and AR-DRG

 Awareness and Knowledge classification systems, case-mix and specifically AR-DRG system

 Improving Quality ICD-10 AM coding quality and standards

 Impact AR-DRG implementation

 Preparedness AR-DRG implementation and shadow billing

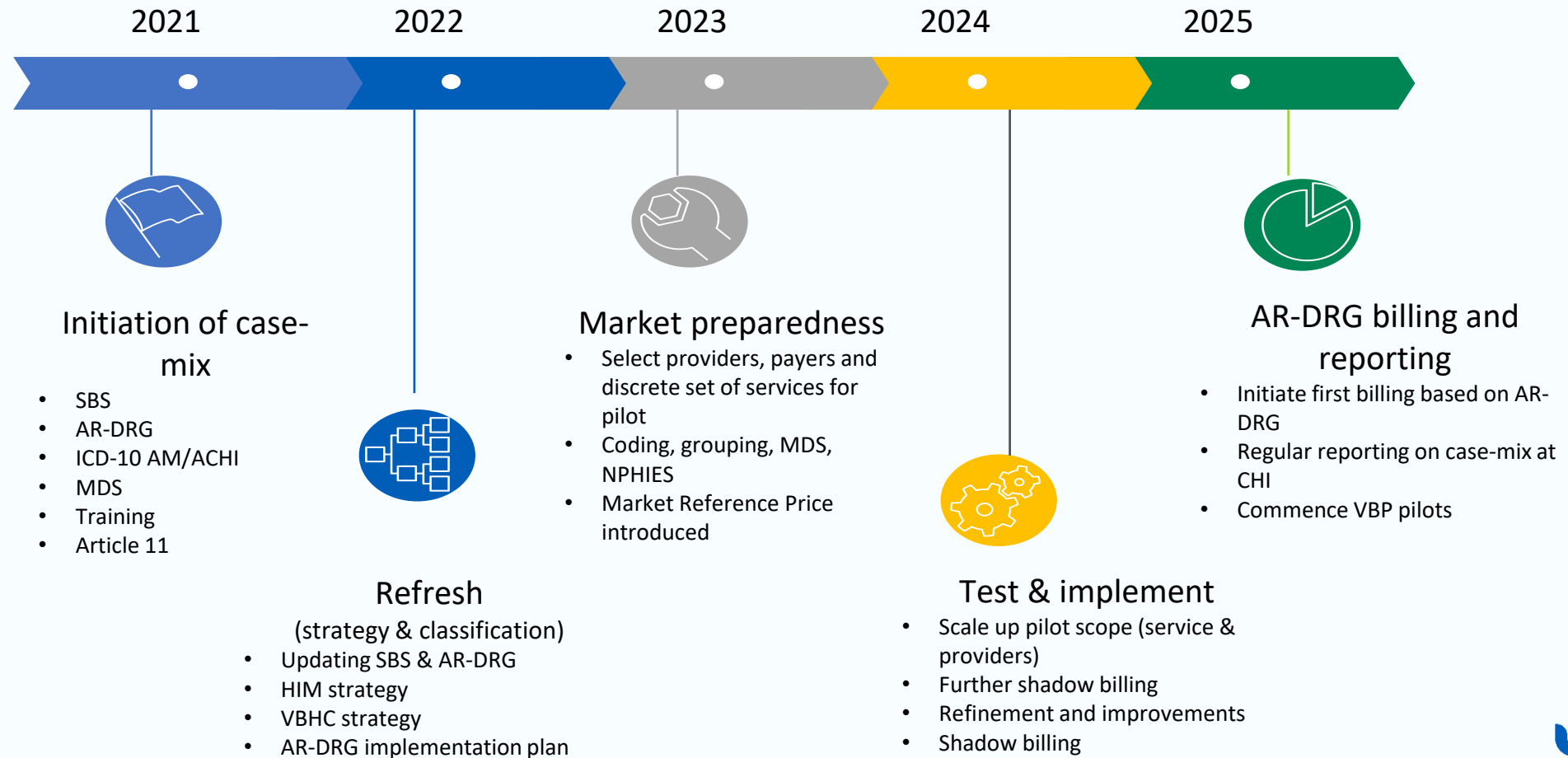
Saudi Private Market is Ready

Education and awareness are key elements of many of these areas, the project team needs to understand AR-DRG and the implications of the change. Similarly, communication and change management activities should be designed to raise awareness and increase understanding among all stakeholders.

Phases and Deliverables

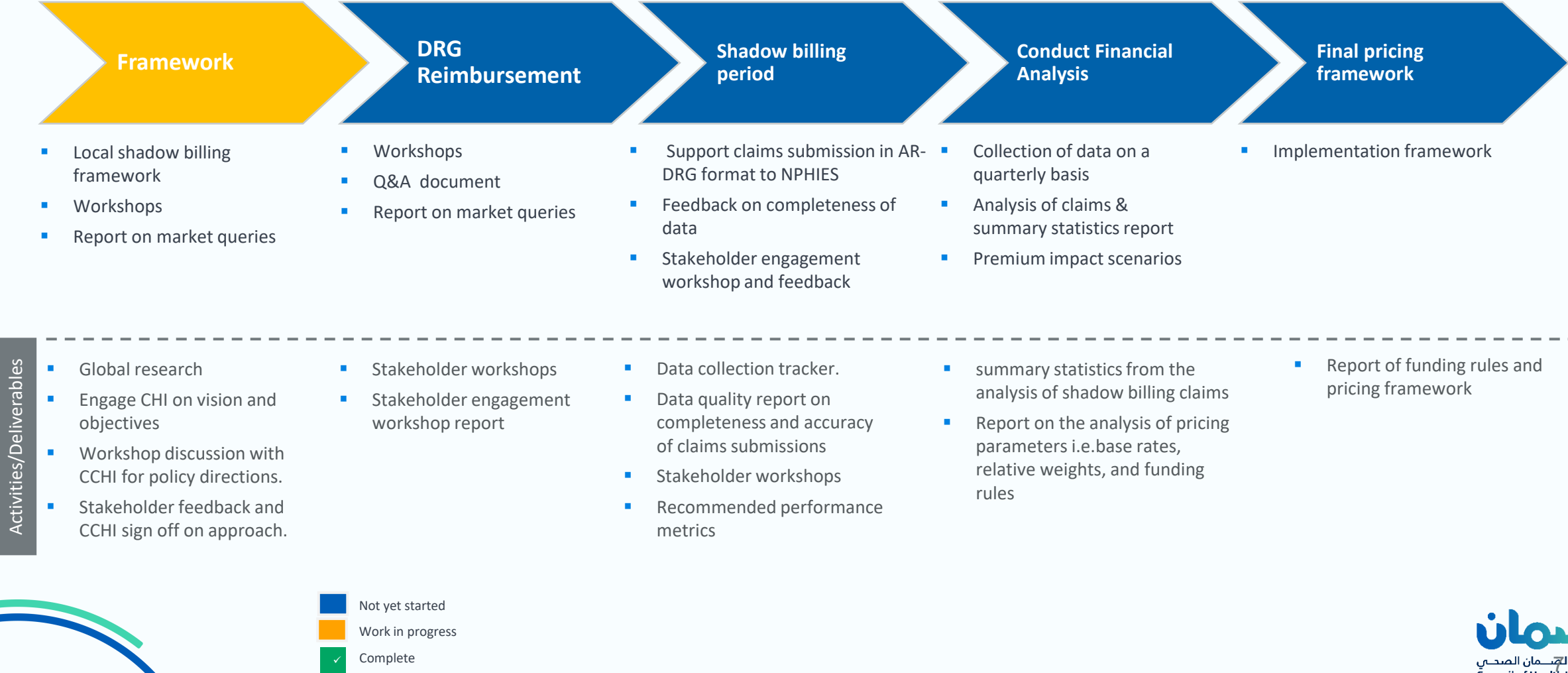
Proposed plan on introducing AR-DRG in CHI

AR-DRG implementation requires piecemeal approach with series of testing and pilots, followed by interdependencies

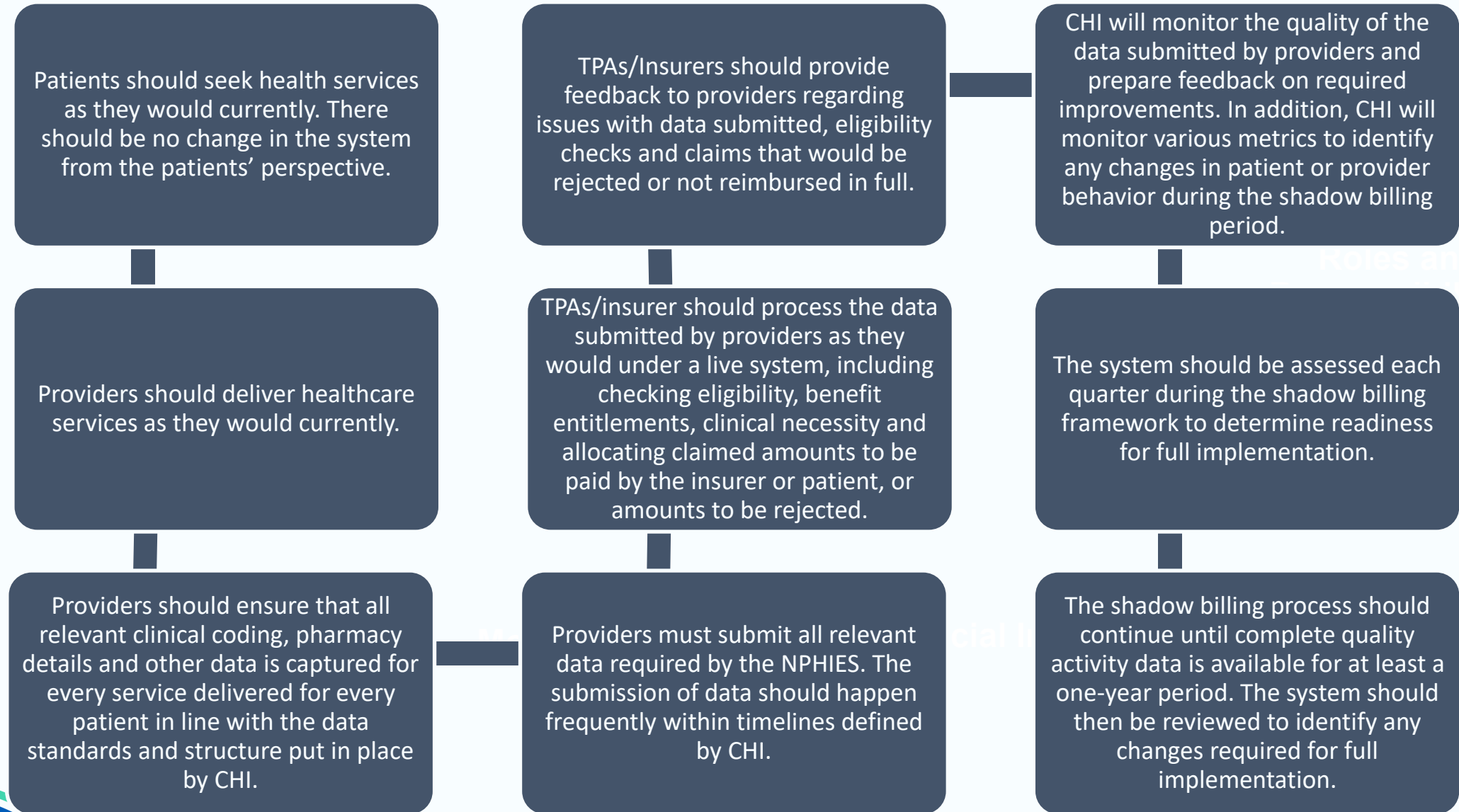


Shadow Billing Phases and Deliverables

Workstream 5 will be completed in steps as outlined below. Specific details are covered in the project timeline



The Shadow Billing phase



Shadow Billing Objectives

Shadow Billing Objectives

Shadow billing involves using both the existing fee for service pricing system and the new AR-DRG reimbursement system simultaneously. This is a testing phase where selected payers and providers will apply AR-DRG to better understand case mix of services provided and potential financial implications prior to full implementation.

Parallel collection claims

Fee for Service

AR-DRG
Reimbursement

This approach helps to collect accurate data, report on any financial changes, and model the impact of changes that may occur when implementing AR-DRG system.



Assess readiness of the health system

Data, systems, people and processes



Assess financial impact



Monitor changes in the system

For example, behaviour changes by provider



Facilitate development and prep for full implementation

Objective 1: Assess readiness of the health system

The shadow billing period will be used to ensure that all components of the health system are in place and ready for the full implementation of the AR-DRG reimbursement framework.

Data

Data should capture all required data elements clinical coding, relevant dates, financial information. Providers should submit complete and accurate data to NHPHIES, data should be available to TPA and CHI on a live basis.

Systems and Processes

Updates to systems required including clinical coding, data integration, costing, RMC, data submission to NPHIES. Payers/TPA need to ensure systems for pre-auth, claims process are all in place.

Assess readiness of the Health system

Pricing Framework

The underlying clinical coding and funding framework need to be well defined prior to start of the shadow billing period. Various parameters will be reviewed and updated as more experience is gathered during the shadow billing period.

Monitoring Framework

A monitoring framework should be established to identify any deviations of experience from expectations and inform change/updates required in various components of the system

Objective 2: Assess financial impact

One of key objectives of the shadow billing period is to assess the financial impact of the implementation of AR-DRG reimbursement on all relevant stakeholders

Collection of all activity data	Complete activity data will be submitted by providers to NPHIES, processed by the TPA/Payers and then collected by CHI to perform monitoring of the system and financial impact analysis.
Development of a financial impact model	Milliman will develop a financial impact model using the activity data collected to allow modelling of different reimbursement parameters, including relative weights and base rates for AR-DRG reimbursement, to assess the impact on the health care budget as well as on the revenue of the different providers.
Review of the funding framework	The data collected during the shadow billing framework and the financial impact model will be used to review the reimbursement parameters, including the relative weights and base rates used for AR-DRG reimbursement.

Will providers submit AR-DRG format in NHPIES or data from NHPIES will be used to grouping into AR-DRG by CHI?

Objective 3: Monitor changes in the system

Based on studies on global experience, we expect that there will be some unexpected changes in the system as all stakeholders enter the shadow billing period. A common example is provider behaviour where changes can be observed in both coding practices or admission procedures.

Data	A number of metrics should be monitored to assess changes in the system over time, including proportion of encounters by severity level, case-mix, readmission rates, amongst others.
Stakeholder engagement	Clear communication channels should be established during the shadow billing period to allow for stakeholders to raise any issues or queries through official channels as and when they arise.
Training and support	Offering training programs and ongoing support to stakeholders will help support consistency across different providers
Interventions	The shadow billing framework or the system may need to be refined to address or correct any adverse experience during the course of the shadow billing period.

Objective 4: Facilitate development and prep for full implementation

Implementing various processes during the shadow billing period will help with identifying which areas of the system need support in the preparation for full implementation.

Data structure	Assess any additional data fields to be included in the data specification.
Coding standards	Identify any changes required to the clinical coding standards, including any gaps that should be filled for services that are not currently covered by the coding standards.
Pricing framework	Review and update the pricing framework including the relative weights, base rates and funding rules beyond what have been considered so far – e.g. outlier reimbursement, add-on price list.
Systems and processes	Identify any gaps or inefficiencies in the existing systems and processes to close the gaps or improve processes.
Clear regulations	CHI should ensure that regulations clearly define the system requirements, responsibilities of stakeholders, and timelines that should be met.
Stakeholder engagement	CHI should facilitate regular stakeholder engagement to ensure that stakeholders are aligned, and that any challenges or queries that emerge can be dealt with quickly and also consistently across the different stakeholders.
Regular reporting	It is important to ensure that stakeholders are kept updated as to the progress of the shadow billing period.
Develop process for future reviews and updates	The AR-DRG system will need to be updated in future on periodic intervals. The process for that should be set up during shadow billing as various components such as base rates, relative weights and classifications are identified.

International Case Studies

Overview

During the development of the shadow billing framework for CHI we have considered the experience of other systems globally. These systems are detailed below:

1. Implementation of DRG reimbursement in Abu Dhabi, UAE

- DRG reimbursement using 3M's IR-DRG grouper was implemented in 2010 on a pilot basis to a single facility, and then transitioned to mandatory for all private and public facilities from 2013.

2. Implementation of DRG reimbursement in Dubai, UAE

- DRG reimbursement using 3M's IR-DRG grouper was implemented in September 2020 following a shadow billing period of almost three years. Prior to 2020, inpatient activity in the Emirate was reimbursed on a fee-for-service basis.

3. Implementation of DRG reimbursement in Germany

- Germany implemented DRG payments in 2003 following a 3-year transition period from per diem charges, activity-oriented payments, and procedure fees.

4. Implementation of activity-based funding in Ireland

- The Irish public health system announced the transition from block budget funding for hospitals to activity-based funding in 2012. An initial transition plan was put in place for the period from 2015 to 2017

5. Implementation of DRG in USA

- DRG adoption in the US began in the 1970s and was adopted by Medicare in the 1980s. DRGs adoption continues to increase, though is not yet universal

Abu Dhabi, UAE

The Emirate of Abu Dhabi provides full medical coverage to all nationals of the United Arab Emirates (UAE) living in Abu Dhabi under its Thiqa program. Inpatient care is provided through all hospitals (public and private). DRG reimbursement for inpatient services was first implemented from the end of 2010, and then mandated in 2013. IR-DRGs developed by 3M were adopted. This was mainly driven by high claim rejection rates, in addition to overuse of the fee for service payments.

The Abu Dhabi DRG reimbursement mechanism is maintained by the Department of Health, Abu Dhabi. Some of the characteristics of the DRG are noted below.

Only inpatient acute cases are included in the DRG reimbursement, while day cases are excluded. Transferring facilities receive a per-diem payment based on the services provided. The receiving facility receives DRG reimbursement

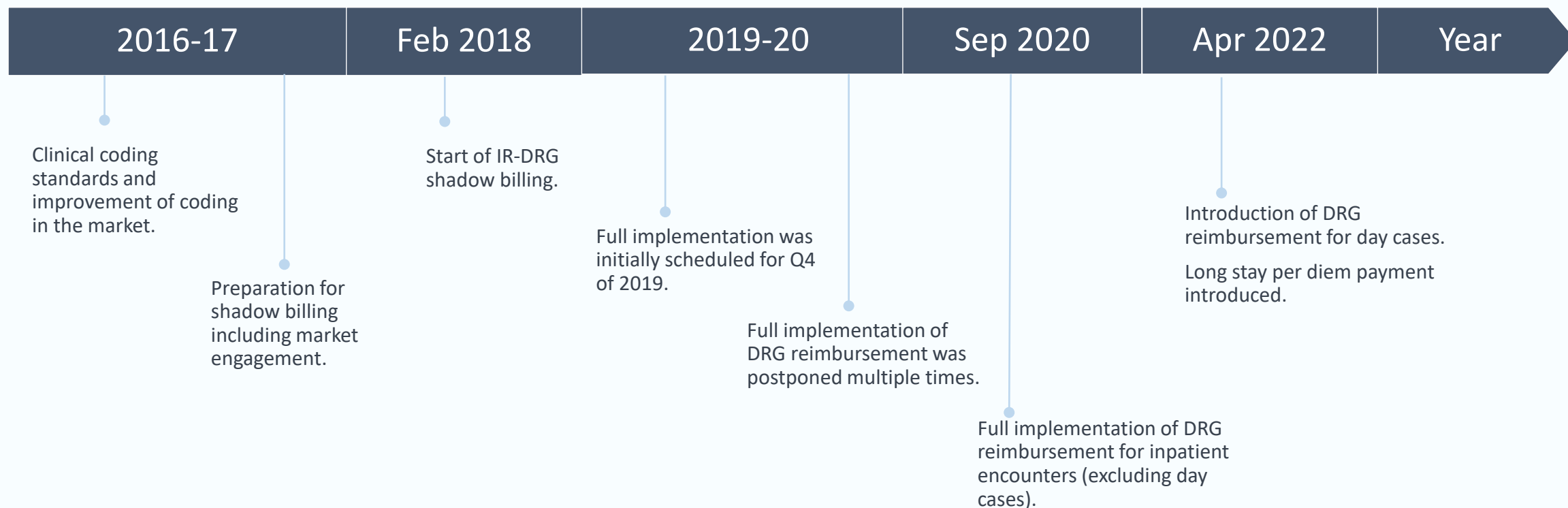
- IR DRG are based on ICD 10 CM and CPT codes
- Reimbursement is based on a market standard base rate and a hospital negotiates an adjuster between 1 and 3 based on their

Transition strategy

- Initially, DRG payment mechanism was implemented one pilot facility, the Sheikh Khalifa Medical City. Since 2013, DRGs became mandatory for reimbursement of all inpatient visits in public and private hospitals.
- All providers and payers are required to sign a standard contract that uses DRGs to pay for inpatient services. The contract specifies a base rate per inpatient stay with a room to negotiate.
- There is regular updates to relative weights in 2–3 year cycles.
- Currently provider quality monitoring exists but is not linked directly to DRG payment.

Dubai, UAE

DRG reimbursement for inpatient services was implemented in September 2020 following a shadow billing period of almost three years. Dubai, like Abu Dhabi, uses IR-DRGs developed by 3M which rely on ICD10-CM and CPT codes. The timelines for full implementation of DRG reimbursement in Dubai are shown below:



Dubai, UAE

Objectives	Stakeholders	DRG Reimbursement and Financial impact	Monitoring/Financial Impact
<ul style="list-style-type: none">Support financial neutrality in the change from fee-for-service billing to DRG reimbursement	<ul style="list-style-type: none">Providers continued to submit claims through the e-claims platformIn addition, a single line per encounter with assigned DRG code and zero billed amount.Payers and regulators were able to analyse assigned DRG, and underlying activity data to understand variations in service and length of stayDHA engaged stakeholders through regular communication (circulars/workshops)	<ul style="list-style-type: none">DRG prices were based on base rate, relative weight and a negotiation factor between 1 and 3.25Negotiation was between payer and providerShadow billing data allowed the regulator to determine a financially neutral negotiation factor between payer and provider pairsPayers must submit their agreed negotiation band factors	<ul style="list-style-type: none">DHA continued to monitor data submissions,Stakeholder were afforded a chance to compare existing payments in a fee for service environment and DRGReview of DRG payment parameters before full implementation

Germany

The Social Health Insurance Reform act of 2000 obliged the self-governing bodies to select a universal, performance related prospective case fee payment system based on DRGs. Germany implemented DRG payments in 2003 from following a 3-year transition period from per diem charges, activity-oriented payments, and procedure fees. The DRG system in German covers all hospitals (public and private) and all payers (public and private)

In a pilot phase 2001 the AR-DRG was introduced to 20 hospitals forming the foundation for the G-DRG. Local cost accounting model was developed, the International Classification of Procedures in Medicine of the World Health Organization was converted into the German Operations and Procedures Codification Index

Preparation phase 2000-02: Translation and adapting classification catalogues

2003 – 2004 Budget natural phase of the G-DRG implementation

2003 Hospitals to switch their billing to the G-DRG system on a voluntary basis

2004 National hospitals were legally forced to use DRG system for billing inpatient services

The transition period allowed hospitals to adjust and ensure they do not face unexpected losses

Convergence phase, from the statewide base rates to a nationwide base rate

Base rates hospital specific and gradually adjusted towards the state-specific base rates

The statewide rates have been progressively converging to the national corridor

Ireland

Activity Based Funding was announced in 2013 in Ireland and AR-DRGs were approved for use for inpatient classification. An implementation plan was put in place from 2015 to 2017.

For the first few years of the implementation of Activity-Based Funding, a focus was placed on developing the skills, capacity and infrastructure required to support the change in hospital funding including developing coding capacity and ensuring that there were adequate coders in place for the hospital system.

As part of the implementation plan, transition payments were put in place for hospitals whose average price was either above or below the approved national price. Hospitals with a higher cost based were required to work on reducing their average costs over time, and reasons for unavoidable higher costs were investigated. Up to 2023, transition payments are still in place.

For the purpose of shadow billing, a “hub and spoke” model was proposed, with activity-based reimbursement being implemented in the hub or central hospital of each hospital group initially, and then subsequently rolled out to the spoke hospitals. However, there was difficulty identifying the hub hospital for each hospital group.

The progress towards full implementation has not been as initially planned, with the delays attributed to “significant variability in the quantity and quality of outpatient data and lack of consistency in reporting specifications”.

United States

Healthcare in the USA is financed by a mixed system of private and public insurance. The Medicare DRG system was introduced in the 1980s in a phased approach allowing time for providers and purchasers to understand the new system. Payments were a combination of the historic payment using the hospital-specific base rate and the DRG payment using based on a national base rate.

Year 1: Hospitals would receive 25 percent DRG payment and 75 percent historic payment

Year 2: 50 percent DRG payment and 50 percent historic payment

Year 3: 75 percent DRG payment and 25 percent historic payment

- DRG was based on national base rate, with adjustments to prices to allow for minimum risk to providers
- DRG payments initially allowed for operational costs, and progressively incorporated capital costs with adjustments

The new payment system were effectively communicated and engaged with stakeholders. Regulations provided formulas of prices and how payments will work

Evaluation and monitoring on a regular basis. Refinements were made

International Case Studies – Lessons Learnt

Clarity of objectives or vision	There needs to be clarity on the vision and objective for transitioning into DRG payments. This along with expected outcomes helps guide the health system during the implementation phases and becomes easier to manage unexpected outcomes.
Gradual phase in	<p>Most countries made changes by following a phased in approach over 3-10 years.</p> <p>KSA may need to make decisions on pilot providers and consider the proposed timeline for shadow billing. The gradual phase in allows for testing and refinement of processes and progression into AR-DRG. This allows time for stakeholders to adjust and realise the benefits of the new payment scheme and put in place necessary changes to systems and processes.</p> <p>A phased in plan should reflect stakeholders, roles and expected timelines for their activities.</p>
Monitoring	<p>Adequate monitoring framework must be in place in relation to quality of care and cost control. For example, ensuring accurate coding, otherwise there may be increased costs due to inaccurate coding.</p> <p>In some cases, providers changed their behavior by discharging early to maximize profits, these metrics will need to be monitored to enable corrective measures to be put in place.</p>
High quality of data	<p>High quality of data is necessary for ensure an efficient system. Coding and costing data must reflect reality. Inaccurate data may lead to under/over payments for providers, impacting patient care.</p>
Transparency and stakeholder involvement	<p>Transparency is key to ensure positive change of behaviour by providers towards efficiency. Stakeholders will be part of the solution. This can be done through consultative workshops, draft policy or framework documents published for comments, detailed explanation of concepts to stakeholders to ensure full understanding.</p>
Training	<p>Training and workshop programs were conducted for relevant stakeholders during the preparation for and early implementation of DRG transition. The focus mainly covering topics such classifications, coding standards, coding quality, DRG system design and grouping algorithms, costing and tariff setting, reporting, and DRG-specific performance monitoring.</p>

Key Considerations

Pre-requisites

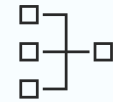
Prerequisites Prior to Commencing Shadow Billing



A clear and flexible pathway towards full implementation of the various reimbursement mechanisms. Timelines should be clearly communicated so that providers understand their obligations.



Coding and data standards should be well defined by CHI and rolled out to all providers.



Systems and processes must be in place for the collection of data from providers.



Base rates and relative weights to be applied for financial impact analysis. These need to be available for market to understand how to apply them and reflect expected future reality as closely as possible. These can be refined as the shadow billing progresses



Roles and responsibilities should be defined and communicated to the relevant stakeholders.



Formal communication channels should be established to ensure that all queries and issues are addressed in a timely manner and consistently across stakeholders. This should include regular workshops with all stakeholders.

Stakeholders

Stakeholders

We have identified the following stakeholder that are expected to have some role during the shadow billing period.

Stakeholder	High-level description of role
Healthcare Providers	Voluntary participation of the healthcare providers during the initial stages of shadow billing encouraged. As phases progress CHI would want to ensure participation is wide, covering a representative number of small to large facilities providing secondary and tertiary care, including nursing homes in all regions.
Healthcare Payers	Insurance companies and Third-party administrators TPA to managing member enrolment and claims processing on behalf of insurers
CHI	Regulator of the Health system
Ministry of Health (MoH)	MoH is the executive body, their role in policy decisions for the health system.
SAMA	Regulator and licensor of health insurance companies in the Kingdom of Saudi Arabia.
NHPIES	

Roles and Responsibilities

CHI

As the driver of health reform in the Kingdom, the CHI has key responsibilities to fulfill during the shadow billing period.

Providing oversight of the entire system.

Making policy decisions as the system is reviewed.

Publishing regulations including the timelines and parameters of the shadow billing period.

Mandating the required components of the system such as coding standards, data structure, timelines for submission of data and costing methodology.

Facilitating industry engagement and support throughout the shadow billing period. This may take the form of workshops, experience sharing, providing enabling tools, training knowledge sharing, circulars and published documents.

Identify challenges and barriers based on feedback from stakeholders.

Milliman/3M

Milliman will provide technical support to CHI throughout the shadow billing period as required.

Providing technical support to CHI in implementing shadow billing

Facilitating industry engagement and support throughout the shadow billing period. This may take the form of workshops, experience sharing, providing enabling tools, training knowledge sharing, circulars and published documents.

Monitoring data submitted, ensuring it means expected quality, accuracy and completeness.

Conducting financial impact analysis

Reviewing pricing framework parameters and funding rules

Facilitating industry engagement and support throughout the shadow billing period. This may take the form of workshops, experience sharing, providing enabling tools, training knowledge sharing, circulars and published documents.

Healthcare Payers/Third Party administrators

Although no claims will be reimbursed during the shadow billing period, the payers/TPA should prepare all systems and processes that will be required under full implementation.

Develop systems and resourcing to fulfil all required TPA functions in line with the agreed SLA, monitor of both costs and quality of care. Systems/process need to integrate coding guidelines, technical support systems, training, and coding audits.

Receive claims data from providers for notional processing

Verify the eligibility of each service against the approved schedule of benefits

Assess the appropriateness of any treatment/services for the listed diagnosis codes and its convenience for the patient's condition

Provide feedback on data concerns and services/claims that would be declined either fully or partially under the insurance system

Best practice??shadow billing budgets and financial tracking of claims

Healthcare providers

The role of the providers during the shadow billing period is critical as the providers are the source of all data and clinical coding required.

Healthcare providers must continue to provide health services to the population

Coding and Grouping - Ensure appropriate coding and grouping is followed

- Proper documentation in clinical records
- Ensure availability and the training of skilled coding staff
- Ensure presence of consistent coding rules

Data preparation and submission

- Ensure that data is populated in the format and structure as required by the NHPIES systems
- Submit data to CHI within the required timelines
- Review the data taking into account any feedback received from CHI, Insurers/TPA. On data completeness, accuracy and appropriate coding
- Establish billing in line with the AR-DRG data format and rules
- Update RCM systems and processes

Cost reporting

- Implementation and monitoring of costing mechanisms
- Sharing costing output with CHI

Monitoring

Monitoring

During shadow billing, CHI will monitor components of the DRG reimbursement system. Monitoring, evaluation and provision of feedback will enable continuous refinements, adaptation and ultimately lead to improved outcomes.

Establish a Shadow Billing Oversight Committee led by CHI and including all key stakeholders from the market. Representation from providers, TPA or Insurers, NHPIES, other stakeholders such as MOH, Case Mix.

The committee should meet regularly to monitor, discuss and resolve issues as they arise.

Establish key performance areas for tracking the success of the shadow billing implementation. These will be monitored and tracked regularly, forming the basis of reporting into the oversight committee.

KPIs should cover the following areas.

- 1) Quality of care – to ensure the system incentives continuous improvements in provision of care.
- 2) Monitor data quality along three dimensions: completeness, consistency and accuracy.

Milliman will identify performance metrics to be monitored through out the shadow billing period. Some of the examples are shown in the next. A document on methodology for monitoring will be shared with CHI.

Metrics to be monitored for Provider/Health System

The following metrics should be monitored at a provider and system level on a quarterly basis throughout the shadow billing period:

Metric	Description
Data completeness	A scorecard approach per provider to monitor progress towards complete data submissions
Overall case-mix index	The change in the average severity of all inpatient cases
Utilisation rate	The number of admissions per 1,000 lives
Mix of admissions by severity level	The % of admissions falling under minor, intermediate and major complexity for each MDC and overall
Average length of stay	The change in average length of stay by AR-DRG, MDC and overall
Proportion of same day DRGs	The proportion of total DRGs that are day cases
DRG outlier rates	The percentage of DRGs reimbursed as low and high outliers
Average # of secondary diagnosis codes	The change in the average number of secondary diagnosis codes per admission by AR-DRG, MDC and overall
Average number of services for each admission	The change in the average number of services per admission by AR-DRG, MDC and overall
Number of hospital acquired complications	The number of hospital acquired complications per 1,000 lives by AR-DRG, MDC and overall
Number of unplanned 30-day readmissions	The number of unplanned 30-day readmissions as a % of all admissions by specialty and overall
Bed occupancy rates	The percentages of beds occupied by hospital and by specialty

Financial Impact

Financial Impact analysis

Financial analysis plays a crucial role within the shadow billing phase and informing providers of the results of this analysis gives them time to improve coding and make adjustments to clinical practice before they face the financial consequences of a new payment system.

Revenue Analysis

- Assess the potential impact on revenue by comparing reimbursement rates under the current fee for service payment system with those under the AR-DRG system.
- This involves analyzing historical data to estimate how much reimbursement might change for various procedures or diagnoses.

Case Mix Analysis

- Examine the distribution of cases and patient types currently treated at the facility to predict how these cases would be grouped and reimbursed under the AR-DRG system.
- This analysis helps in understanding the diversity and complexity of cases.
- Also helps to understand how coding practices are evolving

Financial Risk Assessment

- Evaluate potential financial risks associated with the transition, such as revenue fluctuations, cash flow variations, or increased financial exposure due to changes in reimbursement patterns.

Benchmarking and Comparison

- Compare your organization's financial performance and operational metrics with industry benchmarks or similar facilities that have already implemented DRGs to understand potential outcomes and best practices.

Regular collection of data from the market on a quarterly basis to feed in financial impact model.

CHI needs to make decision on whether to apply:

- 1) one base rate for all providers
- 2) Differentiated base rates by region or type of provider

Review and refine

Review and refine

Review system by simulating scenarios based on various base rates, funding rules, and other market variables
Recommend final pricing framework to be implemented

Review process should be based on results from monitoring and feedback by stakeholders. CHI should regularly open channels for communication to be able to adapt and consider alternative options to pricing and funding components of AR-DRG payments

Groupers, coding quality and classifications will need to be monitored and updated.

References

References

Abu Dhabi:

[https://www.mbrsg.ae/getattachment/612734c2-9872-4a96-9674-e624e71aba95/Insights-into-the-Diagnosis-Related-Group-\(DRG\)-pa.aspx](https://www.mbrsg.ae/getattachment/612734c2-9872-4a96-9674-e624e71aba95/Insights-into-the-Diagnosis-Related-Group-(DRG)-pa.aspx)

<https://documents1.worldbank.org/curated/en/895741576646353914/pdf/Transition-to-Diagnosis-Related-Group-Payments-for-Health-Lessons-from-Case-Studies.pdf>

<https://mbrsgcdn.azureedge.net/cmsstorage/mbrsg/files/61/612734c2-9872-4a96-9674-e624e71aba95.pdf>

https://www.doh.gov.ae/-/media/Feature/shafifya/analysis/updated_shafifya_Analysis_WebsiteUpdateFormCCS-WU-01-16.ashx

<https://oxfordbusinessgroup.com/overview/expanding-coverage-development-comprehensive-health-strategy-boosts-services-and-quality-care>

<https://www.doh.gov.ae/-/media/Feature/shafifya/Prices/Adjudication-Rules/ClaimsAdjudicationRulesV2012.ashx>

https://www.doh.gov.ae/-/media/Feature/shafifya/Prices/Adjudication-Rules/Addendum4_V2012.ashx

https://www.doh.gov.ae/-/media/Feature/shafifya/Prices/Methodology_of_HCPCS_reimbursemen_Sep_15_14.ashx

References

Dubai:

<https://www.isahd.ae/content/docs/GC%2009-2015%20Coding%20Standards.pdf>

<https://www.isahd.ae/content/docs/General%20Circular%20DRG%20Implementation%2004102017%20v3.pdf>

<https://www.isahd.ae/content/docs/GC%2001-2018%20DRG%20Implementation%20-%20Phase%20II%20of%20Shadow%20Billing.pdf>

<https://www.isahd.ae/content/docs/eClaimLink%20General%20Circular%20GC08%202018%20-%20Clarifications%20on%20Collection%20of%20DRG%20Negotiation%20Factors%20and%20Reporting%20Requirements%20of%20DRG%20Financial%20Parameters%2029072018.pdf>

<https://www.isahd.ae/content/docs/GC%2019-2020.pdf>

<https://www.isahd.ae/content/docs/GC-21-2020.pdf>

<https://www.isahd.ae/content/docs/GC%2003%202022.pdf>

References

Ireland:

<https://www.pna.ie/images/mftp.pdf>

<https://www.researchgate.net/publication/259206372> An economic analysis of money follows the patient

<https://assets.gov.ie/40185/74ffe4e1dc104cd6856b5a32375d8d5f.pdf>

<https://www.medicalindependent.ie/in-the-news/news-features/why-has-introducing-activity-based-funding-been-so-difficult/>

<https://www.hse.ie/eng/services/publications/activity-based-funding-abf-programme-implementation-plan-2021-2023.pdf>

References

Germany:

Bundesministerium für Gesundheit (2016). Abrechnung stationärer Krankenhausleistungen (Billing of inpatient hospital services). Retrieved from <https://www.bundesgesundheitsministerium.de/abrechnungkrankenhausleistungen.html>

<https://www.ncbi.nlm.nih.gov/books/NBK298834/>

<https://documents1.worldbank.org/curated/en/895741576646353914/pdf/Transition-to-Diagnosis-Related-Group-Payments-for-Health-Lessons-from-Case-Studies.pdf>

USA:

<https://oig.hhs.gov/oei/reports/oei-09-00-00200.pdf>

<https://documents1.worldbank.org/curated/en/895741576646353914/pdf/Transition-to-Diagnosis-Related-Group-Payments-for-Health-Lessons-from-Case-Studies.pdf>

http://medpac.gov/docs/default-source/payment-basics/medpac_payment_basics_19_hospital_final_v2_sec.pdf?sfvrsn=0

THANKS!

