Moving to DRG-based hospital payment system: HIM Prerequisites in Iranian context

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Learning Objectives

1. Learning from experiences of other countries in DRG-based systems
2. Gap in Iranian context we should bridge up?
3. HIM pre-requisites for smooth transition to DRG-based system
4. Possible impacts of implementing DRG-based system in HIM
Iranian health system is preparing itself to implement case-mixed budgeting system

The system that is based on DRG coding
It is necessary to learn from others

Countries which have experience moving to DRG Based system

Focus of this presentation is on learning HIM perquisites for Smooth transition
Origin of DRG based systems

- Introduced by Yale university in 1980
- First implemented in New Jersey
- Been deployed in different countries across the world
- Among those are England, France, Germany, Sweden, Estonia and recently UAE)
Main blocks for DRG-based payment systems in HIM

1. Documentation & Data collection
2. Patient Classification & Coding systems
Coding is only as good as the source documentation
Knowledge of clinicians about DRG system is crucial

No coders are involved

Based on Australian AR-DRG

Coding based on ICD-10-GM and OPS-301

Physicians do the coding (physicians are both documenter and coder)
Required Data & Coding

- Coding Diagnosis: ICD-10-GM
- Coding surgery procedures: OPS-301

Age  Diagnoses
Gender  Procedures
Date of surgery  Date of admission  Date of discharge

LOS
Lessons from Germany Experience

Gap between treatment reality and available clinical documentation and coding

Expected short-term increase in documentation

Increased profiling of patients with ICD10-GM and OPS301

Emphasis on DRG learning process by physicians

Expected short-term increase in documentation

Necessity for integration of relevant information with physician’s workflow
Strategies in place

- EMR system that guides and teach user to enter optimal codes according to the coding rules
- Embedding electronic coding component in HIS/EMR
- Real time feedback on how documentation influences codes and DRG code assignment
- Setting DRG Control center inside HIS/EMR as basis for good clinical coding quality
- Treatment according to approved clinical guidelines can enhance DRG-based systems
Problems considered for detection and penalty

1. Up-coding, wrong-coding: hospitals may be incentivized to encode more or higher reimbursed services than actually delivered

2. Cream-skimming or cherry-picking

3. Inappropriate early discharge
Unintended up-coding

Hospitals must reimburse the sickness funds (with role of insurer)

Intentional up-coding

Reimbursement fee penalty payment
Every coded case is equivalent to an invoice

1. Discrepancy between documentation and HIS
2. Distortion in patients’ profile
3. Impact on DRG code
4. Loss in hospital asset
France Experience
GHM
(Grupo Homogene des Malades)

- Inspired by HCFA-DRG
- Patient classification system is based on the French hospital activity database
- Classification based on administrative and clinical information, from discharge summaries (ICD-10) & French classification of procedures (CCAM)
- Clinical data are reported by physicians
• Technical Agency for Hospital Information (ATIH) is responsible for GHM.

• DIMs (Medical Information Units) within hospitals carry out internal controls to analyze the plausibility of data.

• ATIH provides them with a specific program (DATIM) that checks consistency between length of stay, type of admission, CCs and severity levels.

• External data quality checks to identify unjustified billing of services and up or wrong-coding.

• Auditing revealed coding errors and inconsistency in procedures billed.

• If unintentional up-coding or incorrect coding, hospitals must reimburse payments received.

• Detection of intentional up-coding equals with financial penalties for the hospital.
Sweden Experience NordDRG

- Coding Diagnosis: ICD-10
- Coding surgery procedures: NOMESCO classification of surgical procedures, NCSP)

<table>
<thead>
<tr>
<th>Age</th>
<th>Main and secondary Diagnoses</th>
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<tbody>
<tr>
<td>Gender</td>
<td>Procedures</td>
</tr>
<tr>
<td>Newborn( birth) weight</td>
<td>Status at discharge</td>
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<td>LOS</td>
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Processes in place

Control & Quality Check
- Data quality and plausibility check
- Quality checking on annual basis
- Data control to check reporting of compulsory variables

Audits
- Case record audit for checking the quality of DRG-grouped data
- Audits are on a regular basis to identify incorrect coding
- Process in place for use in case of observing any fraud in the records
- Hospital or clinic will be obligated to pay back the discrepancy.
Continuous improvement of coding quality

More time for coding issues in physicians education

Educating medical secretaries in coding and playing more active role in DRG coding

Very few cases of up-coding occur

Much more common down-coding in diagnoses and procedures

Authorities encouragement to operate better coding practice in national level
Encouragement led to a greater number of registered secondary diagnoses.

Cherry-picking or cream-skimming have not occurred among public hospital but among private providers.

Most wrong coding is not a sign of abuse of the system but rather a matter of ignorance.

Significant increase in coding diagnoses (From 1.8 per case in 1998 to 2.7 in 2009).

Led to shorter length of stay.

No evidence of increased level of readmission.
Experience of implementing HRG in England

- Developed from scratch in 1981 and launched in 1991
- Coding based on ICD-10 and OPCS-4
- Discharge summaries are deployed to support coding
- Audit Commission assesses coding accuracy and adherence to national standards for coding
- All acute trusts across England goes under external clinical coding audit
- Results of the audits are fed into coder training
- Approved Clinical Coding Auditor as a key part of the Trust quality assurance programme
Lessons from England

- Well-trained staff to keep up to speed with changes in national standards and guidance
- Possibility of updating codes in case of delay in completing information
- Regular engagement of coders with clinicians to clarify issues
- Number of coders and their skill must be suitable for the purpose of quality data
- Regular analysis of coded data and routine audit by a Clinical Classification Service
- Existence of the Clinical Classification Service at HSCIC as a source of clinical coding guideline and standards at national level
Strategies in place

- Fit-for –purpose IT systems used for capturing the necessary data and coding
- Assessment in place for ensuring the quality of documentation (source documentation for coding)
- Medical records as a source documentation for coding
- Setting DRG Control center inside HIS/EMR as basis for good clinical coding quality
- Treatment according to approved clinical guidelines can enhance DRG-based systems
Data and coding in HRG

- Coding Diagnosis: ICD-10
- Coding procedures: OPCS-4

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<tr>
<td>Gender</td>
<td>Procedures</td>
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<tr>
<td>Anatomical region</td>
<td>Comorbidities</td>
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<tr>
<td>Complications</td>
<td>Status at discharge</td>
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<td>Approach type</td>
<td>LOS</td>
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## Results from Audit during HRG implementation

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<th>Incorrect clinical coding of</th>
<th>Errors in</th>
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<tr>
<td>- primary diagnosis</td>
<td>- LOS</td>
</tr>
<tr>
<td>- Secondary diagnosis</td>
<td>- Age</td>
</tr>
<tr>
<td>- Primary procedure</td>
<td>- Admission method</td>
</tr>
<tr>
<td>- Secondary procedure</td>
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<td>- Comorbidities</td>
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Very limited evidence of a change in the pattern of coding
Errors are due to not following standards and guidance presented by the clinical Classification Service by coders
Main problems in HIM

- Problem in source documentation
- Problem in extraction of data for coders due to poor quality of case notes
- Use of discharge summary as the only or the main source for coding
Tighter deadline for coding

Lack of deploying qualified coding auditors by the Trusts

Lack of approved trainer for data quality and coding improvement
Reluctance of clinicians to coding

Poor quality of documentation as the most significant factor contributing to coding error and DRG change

Classification based on ICD-10 and Nordic Classification for Surgical Procedures (NCSP)

Coding by physician

Wrong selection of principal diagnosis

Missing additional diagnoses

Physicians’ fear of spending more time on coding and having less time for clinical work

Evidence from Estonia Experience
Lessons from Estonia Experience

Necessity for partners’ involvement and provide training

Collaboration of clinicians with coding and documentation quality professionals

Holding educational sessions by physician champions

Need to process, workflow, outcome and training tool

Implementing ongoing CDI programs

Nord-DRG
Newly introduced DRG system in UAE

IR-DRG

2017

2018
IR-DRGs by 3M (international Refined DRG) Based on ICD-10 and CPT

Comprehensive Coding Guidelines by HAAD (Health Authority Abu Dhabi)

HIS or information system designed for coding workflow

IR-DRGs provide financial incentives to increase hospital admissions and reduce quality

Could accommodate country-specific coding modifications and procedure coding systems.
Therefore to prevent this, 3 tools used for quality improvement in UAE:

1. information only
2. public reporting
3. pay for quality
Data and coding in IR-DRG

- Coding Diagnosis: ICD-10
- Coding procedures: CPT

- Age
- Main and secondary diagnoses

- Gender
- Procedures
- Comorbidities
- Complications
- Method of discharge

Weight at birth (infant only)
Iranian HIM context

HIM as an academic discipline in Iran from 1973

Clinical coding was started in Iran by using ICD-8 in 1970s and clinical coders are responsible for the coding

ICD-10 and ICD-9-CM are currently used

More than 20 universities in Iran offer BSc program in HIT, 10 universities offer MSc program in HIT and 8 universities offer MSc program in Medical Informatics and 5 universities offer PhD in HIM as well as Medical Informatics

Successful in developing workforce
Internal audit and reporting of the results by ministry of health

Universities with HIT/HIM programs are so eager to play role in improving related areas in health care

Plenty of research conducted by HIM academics that their result can be translated into the real world practice

Existence of National HIM Association
HIM problems in Iranian context

Quality of documentation by physicians, nurses and admission staff

Quality of coding

Coders with less experience makes more coding error

Evidence on insurance deduction due to documentation deficiencies

Clinical governance strategy had no significant impact on improving content of documentation
Evidence on HIM problems in Iranian context

- Poor quality of documentation (missing or invalid diagnoses, age, LOS, admission weight)
- Lack of independent regular audit of documentation and coding
- Absence of discharge summary in some proportion of patient records
- Evidence on impact of documentation errors on the accuracy of coding
- Clinician’s under-estimate importance of documentation
What are the gaps to bridge in Iran for smooth transition to DRG-based system?

- Need to effective steering committee for clinical documentation improvement
- Need to more effective guidelines as well as regulation on quality of hospital/clinical data
- Need to improve documentation skills in clinicians as well as their motives for documentation
Need to enhancing communication between clinicians and coders

Need to independent regular documentation and coding audit

Need to Clinical Documentation Improvement
Those section of medical records that are important from legal perspective are documented completely.

Clinicians are reluctant to document unless forced by regulation.
What elements need the most consideration for improvement:

- Principal Dx
- Secondary Dx
- Co-morbidities / complications (CCs/MCCs) reflecting severity of disease/risk of mortality
Which aspects need more consideration?

- Issue of incomplete reports, missing values and inconsistent information must be addressed.
- Documentation must include more specificity in order to assure high quality coding.
- Improving IT systems/HIS suitable for enhancing quality of data and codes.
Need to establish and implement CDI strategic and operational plan nationally

Nation-wide accreditation of educational and retraining programs for coding

Training of physicians in documentation and emphasis on its importance in quality of care as well as reimbursement especially the DRG-based systems
Establishing independent auditing program for documentation and coding practice

Creating a culture of collaboration between clinicians and coders (both clinical and financial)

Need to designing national qualification exams in different specialties for HIT/HIM graduates before joining to the workforce

Need to a specialized workforce for clinical documentation improvement
Conclusion

For smooth transition to DRG-based payment system, we need to address HIM issues that may hinder its implementation or contribute to its failure as a part of our readiness plan.
Some References

• WHO. Diagnostic related groups in Europe. Available at url: http://www.euro.who.int/__data/assets/pdf_file/0004/162265/e96538.pdf
• DRG: A general pricing system for treatment in Germany. Available at url: http://www.english.german-hospital-service.com/html/drgs.html
• Quentin, W, Scheller-Kreinsen D, Blumel, M, Geissler, A, Busse, R. Hospital Payment Based On Diagnosis-Related Groups Differs In Europe And Holds Lessons For The United States. Health Aff. 2013, 32(4):713-723

• Scheller-Kreinsen, D, Quentin, W, Busse, R. DRG-Based Hospital Payment Systems and Technological Innovation in 12 European Countries. Value in Health. 2011, 4(8): 1166-1172.


• Geissler, A, Scheller-Kreinsen, D, Quentin W. Do Diagnosis-related groups appropriately explain variations in costs and length of stay of hip replacement? A comparative assessment of DRG systems across 10 European countries. Health Informatics. 2012, 21(S2), 103–115


• Eve-Jones, S. Coding for clinicians. RCS Bulletin. 2015, 96(8): 286-287


• The quality of clinical coding in the NHS – CHKS. Available at url:www.chks.co.uk/userfiles/files/The_quality_of_clinical_coding_in_the_NHS.pdf


• Abbaspour R, Langarizadeh M, Ahmadi M. A Comparison of Coding Quality for Burn Injuries in Deceased and NonDeceased Patients' Records. Health Inf Manage 2013; 10(5): 691.

• [https://www.eclaimlink.ae/docs/3M_RTI_DHA%20Stakeholders%20Meeting_2017-02-08.pptx](https://www.eclaimlink.ae/docs/3M_RTI_DHA%20Stakeholders%20Meeting_2017-02-08.pptx)


• [IR- DRGs. Available at url:](http://solutions.3m.com/3MContentRetrievalAPI/BlobServlet?lmd=1225920803000&assetId=1180606514484&assetType=MMM_Image&blobAttribute=ImageFile)

• [DRG Standards: UAE HAAD Medical Coding. Available at url:](http://www.medicalcodinggulf.com/drg-standards-uae-haad-medical-coding/)


• Kahur, K. Error DRGs–what are they for? BMC Health Serv Res. 2010; 10(Suppl 2): A5.


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Thank You!
Questions?