Study proposal for DRG-Based Case Mix Systems Implementation

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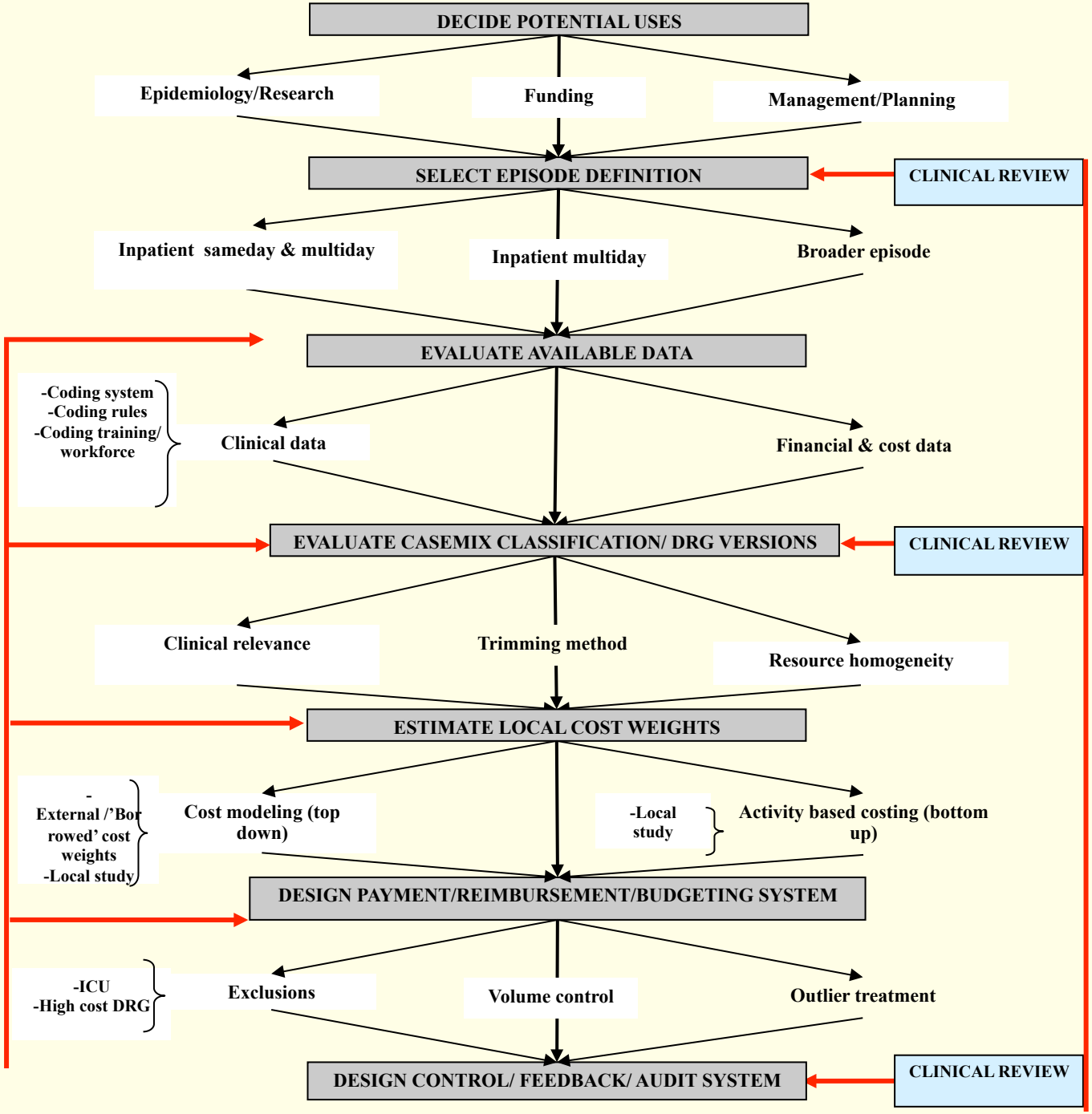
Dr Shahram Ghaffari's/ Pr Terri Jackson Implementation Schema


DECIDE POTENTIAL USES
Epidemiology/Research
Funding
Management/Planning
SELECT EPISODE DEFINITION
CLINICAL REVIEW
Inpatient sameday & multiday
Inpatient multiday
Broader episode
EVALUATE AVAILABLE DATA
-Coding system
-Coding rules
-Coding training/ workforce
Clinical data
Financial & cost data
EVALUATE CASEMIX CLASSIFICATION/ DRG VERSIONS
CLINICAL REVIEW
Clinical relevance
Trimming method
Resource homogeneity
ESTIMATE LOCAL COST WEIGHTS
- External /'Borrowed' cost weights
-Local study
Cost modeling (top down)
-Local study
Activity based costing (bottom up)
DESIGN PAYMENT/REIMBURSEMENT/BUDGETING SYSTEM
-ICU
-High cost DRG
Exclusions
Volume control
Outlier treatment
DESIGN CONTROL/ FEEDBACK/ AUDIT SYSTEM
CLINICAL REVIEW

Step 1 Using Dr Ghaffari's schema on DRG implementation decisions, review for the study :

- Uses
- Episode definition
- Available data
- Casemix classification
- Cost-weight estimates
- Payment design
- Control systems

For 3 English-speaking health system funding implementations: US, Australia, UK

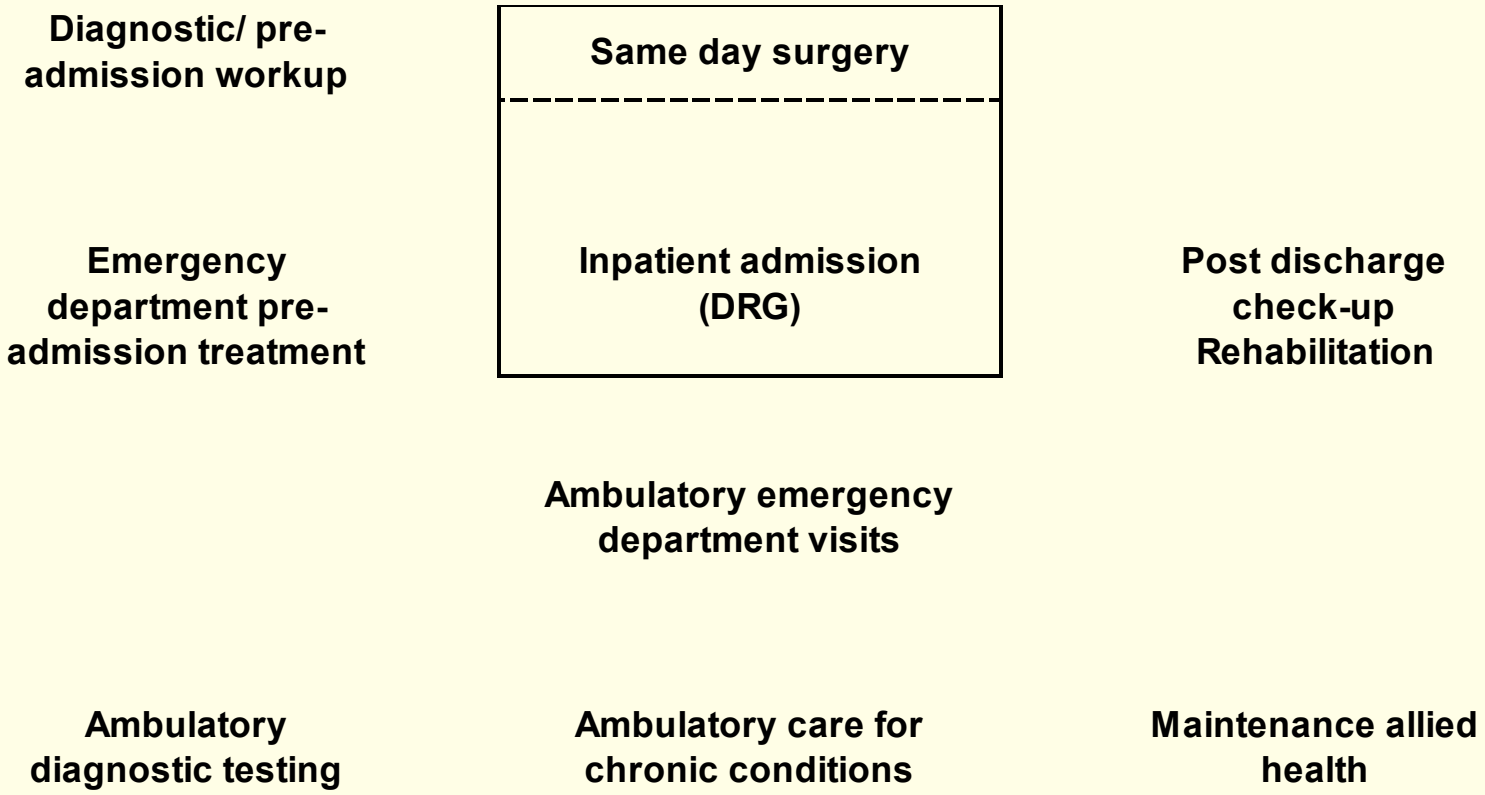
Uses of Casemix

Potential uses of casemix information:

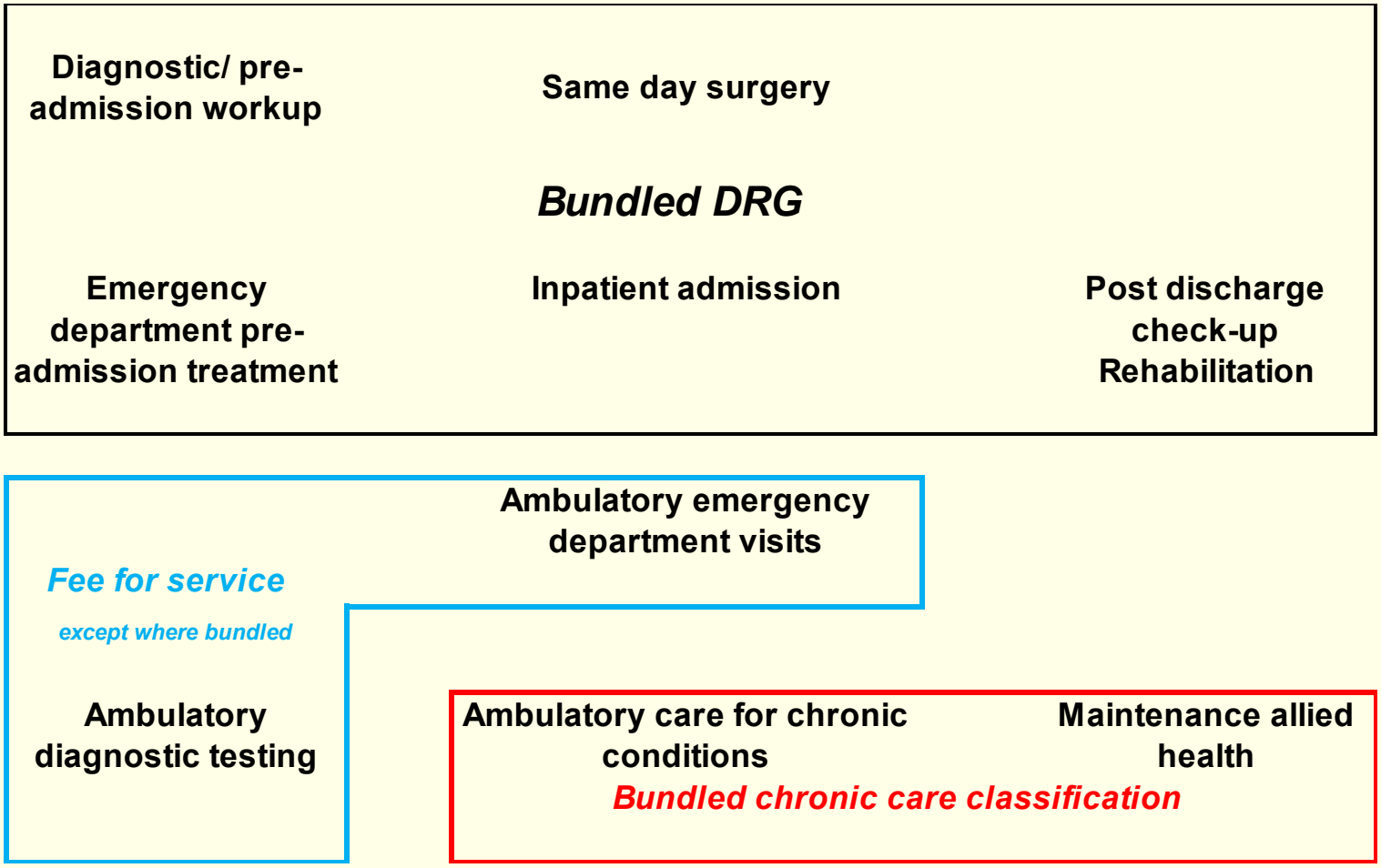
- Research
- Service planning
- Hospital budgeting
- Case payment
- Monitoring quality

Increasing levels of complexity and real world impact

Defining the Episode:



Alternative bundled episode definitions



Evaluation of available clinical and financial data

- Clinical coding system (ICD-9 vs ICD-10) for diagnosis and rocedures
- Training and support for clinical coding
- Rigour and consistency of financial and accounting records

Principles for DRG choice

- Clinical coherence/relevance
- Resource homogeneity
- Transparency and administrative simplicity
- Appropriate episode definition
- Population size

How to choose:to buy or to develop?

- Most DRG-type classifications are similar
  - Differences driven largely by:
    - National procedural coding systems
    - Scope of care settings
    - Level of detail and severity adjustment
    - Population size (empty cells)
    - Proprietary vs public domain ownership
  - *Need to be evaluated in the context of the individual health care system*

Evaluation criteria summary:

- **Clinical coherence/relevance**
  - Differing practice patterns
  - Differing sites of care
  - Differing procedural classifications already in use
  - Differing physician payment arrangements
- **Resource homogeneity**
- **Administrative simplicity**
  - Robustness of source data
  - Transparency and sophistication of hospital management
- **Appropriate episode definition**
  - Sameday/multi-day stays
  - Extended episode of care vs acute admission
- **Population size**
  - 'Empty class' problem
  - Implementation costs

Step 2 Design the pilot in detail

- Select pilot hospitals
- Select a coding and grouping system
- Provide coding training
- Select your costing method
- Provide costing training
- Begin capturing and analyzing information
  - clinical data from hospitals
  - expenditure/cost data from hospitals
  - group clinical data into DRGs
  - create relative weights or identify a weight set to borrow/adapt
- Identify financing mechanism options and begin modeling

Minimum Set of Data and Decisions Required for Pilot Simulations

- **Total number of cases** for at least six months to one year from selected hospitals
- Aggregate **expenditure data** from selected hospitals, for the same time period as the clinical data/cases
- **All** hospital **cases** from the selected hospitals **grouped into DRGs**
- Relative weights, either adjusted using pilot hospital cost data or **borrowed weights**