

**DEVELOPING CASEMIX CLASSIFICATION FOR ACUTE HOSPITAL
INPATIENTS IN CHENGDU, CHINA**

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LIST OF ABBREVIATIONS

ACCC	Australian Clinical Casemix Committee
AICD	Automatic Implanted Cardioverter/Defibrillator (pacemaker)
AID	Automatic Interaction Detector
AIHW	Australian Institute of Health and Welfare
ALOS	Average length of stay
AMI	Acute Myocardial Infarction
AN-DRGs	Australian National Diagnosis Related Groups
AR-DRGs	Australian Refined Diagnosis Related Groups
BPD	Broncho-Pulmonary Dysplasia
CC	Complications and/or Co-morbidities
CCL	Complication and Co-morbidity Level
CCF	Complication and Co-morbidity Factor
CDE	Common (bile) Duct Exploration
CV	Coefficient of variance
D & C	Dilation and Curettage
Dig	Digestive
Dis	Disease
DRG	Diagnosis Related Group
Dsr	Disorder
Dx	Diagnosis
ESW	Extracorporeal Shockwave
GDP	Gross Domestic Product
G.I.	Gastro Intestinal
GIS	Government Insurance Scheme
HIV	Human Immunosuppressive Virus
HSH	Commonwealth Department of Human Services and Health

ICD	International Classification of Diseases
LOS	Length of Stay
MDC	Major Diagnostic Category
MOH	Ministry of Health
MOLSS	Ministry of Labour and Social Security
NHS	National Health Service
O.R.	Operating Room
Proc	Procedures
RIV	Reduction in Variance
RMB	Ren Ming Bi, or Chinese Yuang
SD	Standard deviation
SPSS	Statistical Package for the Social Sciences
T & A.	Tonsillectomy and Adenoidectomy
TIA	Transient Ischaemic Attack
URI	Upper Respiratory Infection
W	With
W/O	Without
WCUMS	West China University of Medical Sciences
WHO	World Health Organisation

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ABSTRACT

Hospital information systems in China are improving and a casemix system for describing inpatient care is looking more feasible than previously. Implementing a casemix classification system for acute inpatient care in China could help to improve regional planning and hospital quality and efficiency. The purpose of this study was to evaluate the Australian DRG system as the basis for developing an acute inpatient casemix system appropriate for China. The applicability of the Australian AR-DRG system has been evaluated (in terms of homogeneity achieved and comparability of rank order) using inpatient data from Chengdu in Sichuan.

Homogeneity achieved was good. The R^2 value (the coefficient of multiple determination) was 0.12 for LOS and 0.17 for cost using untrimmed data and using (L3H3) trimmed data, R^2 was 0.45 for LOS and 0.59 for cost. This explanatory power is comparable to other DRG classification systems although there are a few MDCs in which AR-DRGs exhibit poorer explanatory power.

Rank order of groups was generally comparable. The AR-DRG system incorporates hierarchies of DRGs within groups of adjacent DRGs, within medical and surgical partitions and across all DRGs within each MDC. I have compared the ranking of DRGs based on average cost with the ranking assumed by the AR-DRG system, at the adjacent group level, within partitions and at the level of the MDC. I used the Spearman Rank Correlation coefficient to compare DRG order across partitions and whole MDCs. In general the cost relativities of the Chinese inpatient episodes grouped by the AR-DRG system correspond to the logical hierarchies assumed by the system. On this basis Chinese and Australian episodes of care within most of the MDCs appear to reflect the same broad pattern of resource consumption.

Further research will be needed to determine where and how the grouping rules used in the AR-DRG system might need to be changed to more accurately reflect

Chinese circumstances. For example the cost structures of Chinese health services are different from those in Australia. The Australian Refined DRGs (AR-DRGs) would provide a sound basis from which to develop a Chinese version of DRGs.

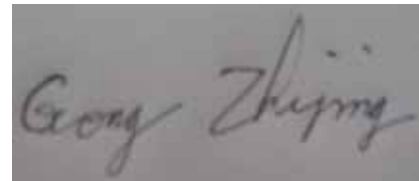
STATEMENT OF AUTHORSHIP

Except where reference is made in the text of the thesis, this thesis contains no material published elsewhere or extracted in whole or in part from a thesis submitted for the award of any other degree or diploma.

No other person's work has been used without due acknowledgement in the main text of the thesis.

This thesis has not been submitted for the award of any degree or diploma in any other tertiary institution.

All research procedures reported in the thesis were approved by the Ethics Committee of the Faculty of Health Sciences, La Trobe University, and the director of the Municipal Health Bureau of Chengdu.

A rectangular box containing a handwritten signature in cursive script, which appears to read "Gong Zhiping".

Zhiping GONG
10 March 2004