

CONTACT
hubert.jamart@fmm.be

Shifting towards a needs-based capitation system in the Belgian context

AUTHORS

Hubert JAMART, M.D.;
Pierre DRIELSMA, M.D., Ph.D.;
Myriam SUETENS, MA;
Prof. Jan DE MAESENEER, M.D., Ph.D.

KEYWORDS

capitation-fee ; needs-based ; alternative financing; health inequities; multivariate regression

SUMMARY

To improve the predicted value of the model that forecast the burden of care for primary health care providers through the development of a system of needs-based capitation.

CONTEXT

In Belgium, most of the primary health care providers (family physicians, physiotherapists and nurses) work in fee-for-service (97.5% of the population). However, 2.5% of the Belgian population is looked after in a capitation system. The actual model for the calculation of the financing of the capitation system is based on the national average cost for primary care in the fee-for-service system, increased with 10% because of the higher prevalence of social problems in the capitated population, another 10% because of the way capitated health care centers work (less hospitalisation, less use of medical imaging and lab-tests) and a decrease with 10% of the denominator (because 10% of the population in the fee-for-service system does not use at all primary care). This leads to different categories that define the amount providers receive in the capitated system. The actual predictive power of this model is weak ($R^2 = 0,10$).

This model is split into four separate ranges according to the social status of patients for the three sorts of care providers as below in the official version you can find on the NIHDI website:

As you can see, we therefore have a **12 'pixel' matrix**.

negotiates the capitation system, has developed a model, adapted from the model used for the sickness funds, utilising a multi-variate linear regression model. The actual predicted value of the model varies from $R^2 = 0,26$ to $R^2 = 0,40$ according to the setting and the valuables used.

ANNEXE 2DMG 2011.04
BILAGE 2GMD 2011.04

MONTANTS MENSUELS FORFAITAIRES APPLICABLES A PARTIR DU 1^{er} AVRIL 2011 A TOUTES LES MAISONS MEDICALES, SAUF AU "THUISVERPLEGING HUIZE MARIA".
FORFAITAIRE MAANDBEDRAGEN VAN TOEPASSING VANAF 1 APRIL 2011 VOOR ALLE MEDISCHE HUIZEN, BEHALVE VOOR DE "THUISVERPLEGING HUIZE MARIA".

CATEGORIE DE BENEFICIAIRES CATEGORIE VAN RECHTHEBBENDEN	MEDECINS DE MEDECINE GENERALE ALGEMEEN GENEESKUNDIGEN	KINESITHERAPEUTES KINESITHERAPEUTEN	PRATICIENS DE L'ART INFIRMIER VERPLEEGKUNDIGEN
Bénéficiaires Ordinaires qui ne bénéficient pas de l'intervention majorée de l'assurance Gewone rechthebbenden die de verhoogde verzekeringstegenwoordiging niet genieten	6,37 EUR	2,83 EUR	0,62 EUR
Bénéficiaires Ordinaires qui bénéficient de l'intervention majorée de l'assurance Gewone rechthebbenden die de verhoogde verzekeringstegenwoordiging wel genieten	11,98 EUR	5,95 EUR	8,40 EUR
Pensionnés, Invalides, Veuves et Orphelins qui ne bénéficient pas de l'intervention majorée de l'assurance Gepensioneerden, invaliden, weduwen en wezen die de verhoogde verzekeringstegenwoordiging niet genieten	16,59 EUR	9,75 EUR	22,95 EUR
Pensionnés, Invalides, Veuves et Orphelins qui bénéficient de l'intervention majorée de l'assurance Gepensioneerden, invaliden, weduwen en wezen die de verhoogde verzekeringstegenwoordiging wel genieten	33,65 EUR	20,44 EUR	85,06 EUR

STATE OF THE ART

Actually, there is, at macro-level, a predictive model that is used to calculate the financial accountability of the sickness funds, in order to calculate the burden of care of the members of the different sickness funds in Belgium. However, this model focuses the total costs, not only the costs in primary health care. Internationally, different models have developed that try to make predictions for costs (e.g. Starfield B: Adjusted Clinical Groups). In the National Institute for Health and Disability Insurance (NIHDI) in Belgium, a working party of the commission that

STATEMENTS FOR DEBATE

The search for a financing system that is more appropriate for the financing of capitated Community Health Centers should be built on a needs-based capitation system in Belgium. Multiple indicators are used to define e.g. pathologies, social factors, functional status. Morbidity-determinants are approached indirectly through utilisation of certain groups of medication, through hospitalisation,... in the future, every Community Health Center, could receive financing, based on the needs of the patients on the list, utilising multi-variate linear regression.

BESIDES THE AGE/SEX, THE MAIN VARIABLES THAT ARE USED FOR THE MODEL ARE:

- Widow
- Low income: <15 000 €
- Self-employed workers
- Deceased in that year
- Disability
- Urbanisation index in the neighbourhood
- Medical supply index in the neighbourhood
- Handicap
- Help from public welfare centres
- Impaired functional status
- Cardiac diseases
- COPD
- Asthma
- Cystic fibrosis
- Diabetes combined with chronic cardiac condition
- IDD
- NIDD
- Exocrine pancreatic diseases
- Psoriasis
- Rheumatoid arthritis, Crohn's disease, ulcero-hemorrhagic recto-colitis
- Psychosis: young adults
- Psychosis: elderly people
- Parkinson's disease
- Epilepsy
- HIV
- Chronic hepatitis B & C
- Multiple sclerosis
- Post-transplant immunosuppression
- Alzheimer
- Thyroid diseases
- Thrombosis
- Coagulation disorders
- Protected habitat

When we cross these health elements all together in the multi variate linear regression you actually get a theoretical average of **2⁴⁰ combinations x 41 age/sex 'pixels' in this new matrix**.