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THE EQ-5D HEALTH STATES VALUE SET FOR SLOVENIA

SLOVENSKA VREDNOSTNA LESTVICA ZDRAVSTVENIH STANJ, DEFINIRANIH Z EQ-5D

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Abstract

Background: *Among other uses, the subjective valuation of health care is also used in economic analyses, through which we are trying to determine the relative cost effectiveness of health technologies. Since cost effectiveness studies are very demanding and take a relatively long time to give results, the parallel estimation of the values of health states would represent an additional and, above all, unnecessary burden. The values of health states are therefore calculated in a separate study. The primary objective of the study is the derivation of a value set for the EQ-5D defined health states for Slovenia while controlling contextual bias.*

Methods: *According to our knowledge, spatial econometrics has never before been used for the purpose of estimating the EQ-5D valuation set. A value set for the EQ-5D health states for Slovenia is presented, based on data from research carried out in 2005. For calculating the value set, a spatial econometric estimator was chosen since it gave better results than the ordinary least squares (OLS) method. To control for contextual bias, a spatial variable was included in the model. Contextual bias has not been excluded from any of the calculated EQ-5D value sets.*

Results: *The EQ-5D defined value set for Slovenia is logically consistent. The defined model has a very good fit. The comparison of models with and without the spatial variable showed that controlling for contextual bias by including the spatial variable improves the fit of the model and produces slightly better results.*

Conclusions: *Due to the good fit of model and logically consistent valuations, the value set can be used in health-related economic and population analyses. Special attention is given to the exclusion of a contextual bias from the model to improve the fit of the model and change the priority settings.*

Key words: EQ-5D, value set, Slovenia, VAS, spatial error model, health technology assessment

Izvirni znanstveni članek
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Izvleček

Uvod: *Subjektivno vrednotenje zdravstvenih stanj se med drugim uporablja tudi v ekonomskih analizah, s katerimi skušamo določiti, katere zdravstvene tehnologije so bolj ali manj učinkovite od drugih. Ker bi bilo za že tako obsežne in zahtevne študije stroškovne učinkovitosti vsakokratno izračunavanje kakovosti zdravstvenih stanj zelo obremenjujoče, se vrednosti zdravstvenih stanj izračunajo vnaprej, v posebni študiji. Namen raziskave, ki je predstavljena v tem članku, je bil izračun vrednostne lestvice, ki vsebuje vrednosti za vnaprej definirana zdravstvena stanja. Cilj raziskave vrednotenja zdravstvenih stanj v Sloveniji je bil pridobitev vrednosti za vsa zdravstvena stanja, definirana po EQ-5D.*

Metode: *Metodologija izračunavanja vrednostnega seta EQ-5D s pomočjo metod prostorske ekonometrije ni bila niti v Sloveniji niti drugje še nikoli uporabljena. V članku je izračunana lestvica za zdravstvena stanja, definirana z instrumentom EQ-5D, za Slovenijo, na osnovi podatkov, zbranih z neposrednim anketiranjem v letu 2005. Za to je uporabljena prostorska ekonometrična metoda, ki se je izkazala za primernejšo kot metoda najmanjših kvadratov. Med pojasnjevalne spremenljivke je dodatno vključena tudi prostorska spremenljivka, s čimer je izločen tudi problem vsebinske pristranskosti, ki se sicer pojavlja in ostaja nerešen v večini evropskih lestvic.*

Rezultati: *Lestvica vrednostnih stanj, definiranih po EQ-5D, je logično konsistentna, kar pomeni, da so vrednosti zdravstvenih stanj logično razporejene, modelirane vrednosti pa se zelo dobro prilegajo podatkom. Celotna lestvica za vseh 243 zdravstvenih stanj je prikazana v Prilogi 1.*

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Zaključek: *Vrednosti, ki so prikazane v lestvici, se lahko uporabljajo v ekonomskih analizah, v populacijskih študijah, ki se ukvarjajo z zdravjem, ter v druge namene.*

Ključne besede: EQ-5D, vrednostni set, Slovenija, VAS, model prostorsko povezanih ostankov regresije, vrednotenje zdravstvenih tehnologij

1 INTRODUCTION

In health care, many types of economic analyses are used that are described in details in numerous books and other literature. In this article, only one type of economic analyses is described and that is cost utility analysis. Cost utility is the only analysis that takes into account the subjective quality of life in the process of evaluating health care states as estimated by population.

In a cost-effectiveness analysis – CEA, the marginal costs of a programme are compared to the marginal effects of a programme. The effects are measured in natural units, such as blood pressure in mm HG, the number of new cases, the number of saved lives and life years gained. The final result is costs per unit of effect. Cost-utility analysis – CUA, on the other hand, compares the marginal costs with the marginal effects of a programme, where the effects are expressed in QALYs or HYEs (healthy years equivalents) (1). QALYs are calculated by multiplying the duration of a health state by its utility (which is measured on a scale from 0 to 1). The advantage of QALY is its ability to take into account morbidity (quality of a health state) as well as mortality (longevity of life in years) and expresses both in one single measure. QALY therefore combines survival in number of years with the utility of the years survived – or in other words, combines the quantity and quality of life years in one single indicator.

In the last thirty years, a lot of effort has been invested into the development of the instruments for health state valuations. The way and method of ascribing a value to a health state is of the utmost importance since these valuations are further used in different models, cost utility analysis, population health status measurements and finally also for decision making on which technologies are going to be financed from public funds. There are multiple methods available for the process of ascribing values to health states. The selection of the best available method is something on which opinions of numerous researchers and experts differ (2). Each method has its theoretical and scientific roots, either in economics, psychology, psychophysics etc. While the economic concept is basically derived from the assumption of the rational behaviour of an individual and on theories that stem from axioms (normative theories). Psychologists and other scientists, on the other hand, rest their beliefs on theories and methods that are more subjective and descriptive in nature. All valuation techniques that have their theoretical background in economic science are based on a trade-off, while techniques that have a background in psychology are in the form of scales (3).

The standardized questionnaire EQ-5D is the most often used of all the generic questionnaires, especially in Europe. It is intended for self-completing. It was designed by the EuroQol Group (4) and has been translated into many languages since 1995. The translation and testing of a questionnaire in another language is demanding and follows defined guidelines. The final translation is approved by the EuroQol Group according to the interim reports in the process of translation. The EuroQol Group is based in Rotterdam. So far, the questionnaire has been translated into 102 world languages, including Slovene (Appendix 2). In Appendix 2, the extended version of the questionnaire is shown, which is used for evaluation where the population value EQ-5D health states are obtained. This version of the questionnaire was used in the years 2000 and 2005 in Slovenia in order to collect values for all health states. However, the long version is not intended for use in clinical, economic or population research as the values do not need to be collected again since a value set was calculated for previously collected research. For further studies, a shorter EQ-5D version is available.

A shorter EQ-5D version, where a respondent describes his/her own health state in all 5 dimensions and which also captures his/her socio-demographic characteristics, can be used in clinical and other studies. The number of studies that use the EQ-5D instrument is growing rapidly – it is mostly used in England and continental Europe, although its use is also increasing in USA, Canada and Asia. 8 out of 10 of the biggest pharmaceutical companies use the EQ-5D and it is also recommended for use in cost utility analyses by the Washington Panel on Cost Effectiveness in Health and Medicine (5). Since 2008, the EQ-5D is a recommended choice among generic instruments in HTA research in the NICE guidelines (6).

2 METHODS

The value set includes estimated values for all EQ-5D health states as defined by the Slovene population. Valuations enable easier priority setting as the value set actually shows the preferences of the population for health states. In the questionnaire, the respondents valued 15 health states that they previously ranked from worst to best. After the ranking, each health state was ascribed a value from 0 to 100. The value 0 represents the worst health state imaginable and value 100 represents the best health state imaginable. All the questionnaires in which health states were not ascribed values were not used in the calculation of the Slovenian value set. The values for all 243 health states were calculated.

An individual cannot rank and value 243 health states as our brain is not capable of comparing and valuing so many states at once. Therefore a sample of health states must be selected whose values could be used for acquiring valuations for all 243 health states using statistical methods. The standard version of the EQ-5D questionnaire includes 15 (incl. unconsciousness and dead) health states (7). This is also the version that is mostly used in valuation studies. Dolan (8) found out that an individual cannot value more than 13-16 health states at once. As it was estimated that using regression on these 15 health states can provide an unreliable valuation for all other health states, our sample was divided into more groups, from which each group evaluated different health states, but individually not more than 15 (9). As a result, more health states were directly valued than a single individual is capable of valuing.

In our valuation task, each investigator had 3 sets of health states. The sets were named set A, set B and set C. Each set contained 15 health states, meaning that each investigator had 3 sets of 15 health states. Each investigator had all three sets, which were then used with approximately one third of the sample. Some health states were included in all three sets, but some were not (Table 1). Health states in each set represent the complete scale of health states from worst to best. In set A, the state of unconsciousness was included, which cannot be used in regression as it cannot be translated into numerical values. Each set also included the state dead as well as best health state of 11111, which are used as anchors on both sides of the scale. The worst health state of 33333 was used in all sets. Sets B and C were developed in 2000 (10). The number of all directly valued health states in all three sets is 23.

Table 1. EQ-5D health states in different sets.
Tabela 1. Zdravstvena stanja EQ-5D po kompletih.

Set A/ Komplet A		Set B/ Komplet B		Set C/ Komplet C	
11211	21111	11211	11112	11211	11112
11111	unconscious	11111	13311	11111	11113
21232	12111	21111	32211	21111	11312
11122	11112	11133	11131	11133	12111
22233	32211	11121	32313	11121	32223
33333	22323	22222	23232	22222	23232
33321	dead	33333	dead	33333	dead
11121		33323		33323	

Source/Vir: Devlin N. et al, 2000

The questionnaire consists of four parts. The first part is intended to familiarise respondents with the descriptions of health states. Each health state has five dimensions (mobility, self-care, usual activities, pain/discomfort and anxiety/depression). In the first part of the questionnaire, the respondent values his/her health state in all five dimensions on the day of the interview. The respondent also marks whether he/she feels better, worse or equal to how he/she felt in the last 12 months on average. The respondent is also familiarised with the visual analogue scale (VAS), where he/she marks how good or bad his/her own health state is on a scale from 0 to 100 (where 0 represents the worst health state imaginable and 100 represents the best health state imaginable).

The second part of the questionnaire is a valuation of the 15 health states from the selected set on the VAS. This part of the interview consists of three phases. The first phase is reading the health states and getting the respondent to know them and distinguish between them. Once the respondent is familiar with the different health states, he/she ranks them from worst to best. Only after ranking the third phase follows where the respondent attaches a value to each health state. The worst health state, 33333, would theoretically have the value 0 attached and the best health state, 11111, would be given a value of 100.

The third part of the interview is a valuation of the same health states that were previously valued using the VAS method, using the time trade off (TTO) method. As this article does not deal with TTO valuation, the procedure is not described.

The last, fourth part of the interview is the collection of individual socio-demographic data: gender, age, education, work experience, smoking habits, experience with illness and postcode.

All the respondents to the questionnaire are older than 18 years, the sample was selected by the Statistical Office of Slovenia using the Central Population Register. In the sample, 1000 individuals in 40 Slovenian municipalities were included. The selection process was two-level: in the first level, 40 municipalities were randomly selected and in the second phase 25 individuals were selected in each municipality. Each person carried a name, last name, address, house number, postcode, municipality, age and gender. The investigators started the interviews in September 2005 and finished in April 2006. 225 questionnaires were filled-out, the average age of the respondents was 45.4 years. After transferring all the data into Excel, we rescaled the data using anchor values that were ascribed for perfect health (11111) and dead according to the following formula:

$$\overline{VAS_i} = \frac{VAS_i - VAS_{dead}}{VAS_{11111} - VAS_{dead}}$$

The logical consistency of health states was checked and an additional ordinary variable I3 was created for the model as described below:

$$D_{i2} = \begin{cases} 1 & if\ some\ problems \\ 0 & otherwise \end{cases}$$

$$D_{i3} = \begin{cases} 1 & if\ extreme\ problems \\ 0 & otherwise \end{cases}$$

$$I_3 = \max\left(0, \left(\sum_{i=1}^{5} D_{i3}\right) - 1\right)$$

where D_i is the i[th] dimension (i = mobility, self-care….) and the undersigned *2* or *3* is the level of problems. I_3 represents the number of deviations from the perfect state on the level of extreme problems. Logical consistency in EQ-5D states refers to the comparison of pairs of different health states and their values. The health state that has a lower or equal level of problems in all categories must have a higher or equal value attached. All questionnaires were fully completed (except for three, where less than three health states were valued or all the health states carried an equal value). This means that 3330 health states values were available (222 persons valued 15 health states each), of which 74 values referred to the state unconscious, 444 values were not used for a value set as they were used for reescalation (health states 11111 and dead) and 76 values were not used for calculating the value set due to logical inconsistency.

By re-escalation and transformation, ten dummy variables (d) and one ordinal variable (I) were created. Under the assumption that the model is linear, it can be estimated using the ordinary least squares method (OLS). In the model, the following regression equation was used:

$$\overline{VAS_i} = \alpha + \beta_1 D_{12} + \beta_2 D_{13} + \beta_3 D_{22} + \beta_4 D_{23} + \beta_5 D_{32} + \beta_6 D_{33} + \beta_7 D_{42} + \beta_8 D_{43} + \beta_9 D_{52} + \beta_{10} D_{53} + \beta_{11} I_3^2 + \varepsilon_i$$

α is a model constant and represents a value that is lower than the value for health state 11111 due to problems, β_i are regression coefficients that represent a change in the values of the transformed VAS estimate due to problems on different dimensions, D are dimensions that are coded in the following way: the first undersigned number represents the dimension (1 – mobility, 2 – self-care, 3– usual activities, 4 – pain/discomfort, 5 – anxiety/depression), the second undersigned number represents the level of problems (2 – some problems, 3 – extreme problems). ε are regression residuals, for which a normal distribution is assumed with an arithmetic mean of 0 and a standard deviation (σI). Because of the potential multicolinearity, a higher standard error is expected, though the FLW theorem (11) assures that because of this, the coefficient estimates will not be biased or less effective. An additional problem is the contextual bias, meaning that ascribing a value to one health state depends on other health states that are valued by the individual. One of the possibilities where contextual bias can be controlled and where model can thus be more precisely estimated is the so called spatial error model (SER), where:

$$\varepsilon_i = \lambda \sum_{\substack{j=1 \\ i \neq j}}^{n} w_{ij}\varepsilon_j + \mu_i$$

With this model, a hypothesis can be tested that OLS regression residuals (ε_i) are correlated to residuals in their neighbourhood ($\sum w_{ij}\varepsilon_j$). The relations that define the neighbourhood of any VAS estimate are included in the connectivitymatrix W. In our case, any two VAS estimates are neighbours if they are provided by the same respondent or if they are situated in the neighbourhood *N(i)*, where an estimate cannot be a neighbour to itself. Contextual bias in our case means that estimates given by a certain individual are not mutually independent, but a certain covariance exists among them. An element of matrix W can therefore be written as:

$$w_{ij} = \begin{cases} 1 & if\ j \in N(i) \\ 0 & if\ j \notin N(i)' \end{cases} \quad j \neq i$$

And the neighbourhood of any point can be written as:

$$\eta_i = \sum_j w_{ij}$$

The connectivity matrix formally expresses the connections that exist between all pairs of points (VAS estimates) on the basis of a previously defined neighbourhood. A model that can be estimated by ML has the following format:

$$\overline{VAS_i} = \alpha + \beta_1 D_{12} + \beta_2 D_{13} + \beta_3 D_{22} + \beta_4 D_{23} + \beta_5 D_{32} + \beta_6 D_{33} + \beta_7 D_{42} + \beta_8 D_{43} + \beta_9 D_{52} + \beta_{10} D_{53} + \beta_{11} I_3^2 + \lambda \sum_{\substack{j=1 \\ i \neq j}}^{n} w_{ij}\varepsilon_j + \mu_i$$

λ represents the coefficient of spatial connectivity and is set in the area $|\lambda| < 1$. In our case, we expect the coefficient of spatial connectivity to be positive, which means that the estimates in the previously defined neighbourhood are correlated or that the differences between the actual and estimated values in individuals are similar.

3 RESULTS

In Table 2, the results of the spatial regression model are shown. The lagrange multiplier test (LM(error)) has a value of 1330 and is statistically significant, which means that the spatial connectivity among residuals needs to be included in the model. This fact is additionally confirmed by the Akaike information criterion (AIC), which has a lower value in maximum likelihood (ML) than in OLS. Therefore we can claim that the model with included spatially connected residuals is better and can be used for calculating the health states value set.

To check the consistency of the models with directly estimated values, the value set was calculated for all the directly valued health states on the basis of the model chosen (Table 3), which were then compared with the values directly ascribed to these health states by the population.

The Pearson's correlation coefficient, which is a measure of the linear relationship between two data sets is 0.960, the average absolute difference (AAD) between both sets amounts to 0.057 (with a minimum of 0.001 for health state 21111 and a maximum of 0.304 for health state 33333). When the Slovenian values are compared with values in other countries, we can see that the AAD in Slovenia is small: it amounts to 0.039 in England and 0.0228 in Japan. The differences between two health states should be checked while bearing in mind that the values go from 0 to 1. The difference 0.057 in Slovenia is in this sense small and is comparable to England, where the sample was 15 times larger than in Slovenia (12, 13).

4 DISCUSSION

The presented value set for Slovenia is the first set that was calculated using the methods of spatial econometrics. The set turns out to be logically consistent, which is not usual due to the subjective valuing of the large number of health states that are being valued. Therefore we conclude that the use of spatial econometrics can be the recommended method for calculating value sets. The values calculated can also be compared in time, where value set turns out to be stable and consistent (14).

For health state valuing, methods such as time trade off (TTO), the standard gamble method (SG) or visual analogue scales (VAS) are usually used. Contrary to the first two, in VAS a value is directly attached to the health state without giving up some other good features. The use of VAS in health state valuation is mostly limited by three practical problems. The first problem is the state »dead« and the recalculation of all health states according to the value given to this state. Dead is not really easily understood as a health state; if a

Table 2. The results of the model.
Tabela 2. Rezultati modela.

	Est.	St. dev.
Constant	0,774***	0,011
D12	-0,061***	0,010
D13	-0,425***	0,015
D22	-0,054***	0,010
D23	-0,108***	0,015
D32	-0,031***	0,010
D33	-0,173***	0,016
D42	-0,056***	0,008
D43	-0,266**	0,012
D52	-0,067***	0,009
D53	-0,132***	0,012
$I3^2$	0,026***	0,001
Lambda	0,662***	0,031

No.	2738
No. of parameters	14
AIC(ML)	-1574,5
AIC(OLS)	-1268,2
LM(ERROR)	1330,172***

Remark: *** p < 0,001; ** p< 0,01; * p < 0,05

Table 3. Consistency measures.
Tabela 3. Mere ustreznosti.

	ML
Pearson correlation coefficient	0,960082
Average absolute difference	0,057078

respondent tries to imagine being in this state, it does not matter how long it lasts. In this sense, this state is different from all the others where the time component matters. Some authors therefore prefer tying the value 0 to the health state »worst health state imaginable« (15), which consequently leads to negative values for some health states (e.g. the state dead). Experimental research (16) showed that health states are valued differently (different values are ascribed to health states) if 0 is attached to dead or the worst health state imaginable (p<0,001).
The second issue is the problem of respondents not valuing health states using values close to the extremes – they do not like to ascribe values of 100 (or close to 100) and 0 (or close to 0) to any health state. Research (16) did not confirm the existence of this problem.
The third issue is the question of a contextual bias, meaning that ascribing a value to one health state depends on the other health states that are being valued. In general it is assumed that in a case when better health states are valued alongside one health state, the individual is biased to ascribe a lower value to this health state and, conversely, if all the other health states are worse than the one being valued, it will be given a higher value by the respondent (16). Bleichrodt found out in a study (17) that the VAS value of a health state is not independent of the other health states being valued. His finding was also confirmed by some other studies (18, 19, 20). The contextual bias can be omitted by using proper statistical methods. The issue of contextual bias was also present in the Slovenian value set and is taken into account by the proper use of the spatial econometrics methods.
The calculated value set for Slovenia is logically consistent and the model values express the real values very well. The value set is therefore appropriate for use in economic and other studies and analyses. The calculation of the value set for all EQ-5D health states will enable all researchers working on clinical, economic or population studies to include the component of quality of life in the calculations and analyses. An additional advantage is that all researchers have an official and validated translation of the questionnaire available and its use in studies will make the valuations

of the respondents' health states uniform; the research can be compared and will be transparent. The use of the Slovenian value set is also possible in some other neighbouring countries who do not have their own value set available but are in some way faster in health technology assessment than Slovenia (Croatia, Montenegro).

In time, when the health care system needs rationalization and the standardization of the services and procedures in the basic benefit package, which must in a sense be based on the criterion of cost-effectiveness, the value set will be of use to policy makers as well. It can represent a basic tool for calculating the relative cost-effectiveness of comparable health technologies. Also the value set is of help in economic analyses when new health technologies are introduced into the system of public financing, be it through the Health Council or Health Insurance Institute of Slovenia. As protocols and the health technology assessment are in the development phase, the value set is crucial as it can already be used in the starting phase of valuing and comparing technologies that increase comparability and transparency.

The value set is of great importance internationally as well: firstly because studies produced abroad can be easily adapted to Slovenian circumstances and also since Slovenian researches can have easier access to international studies and analyses of new technologies that use the EQ-5D value set. Researchers can be included in the international networks and can cooperate and include inputs expressed as values of health states. Due to all these factors, the value set enables the easier, faster, more transparent and, above all, more uniform priority setting in health care programme financing in health care.

5 CONCLUSIONS

In this article, spatial econometric methods are used for the first time in the calculation of the EQ-5D health states value set. Values for all health states are calculated based on the preferences of the Slovene population. The interviews for finding out the preferences were carried out in 2005. Based on the values of the health states that were directly estimated, all 243 EQ-5D health states were included in the model and their values calculated using statistical methods. Besides all five EQ-5D dimensions (mobility, self-care, usual activities, pain/discomfort and anxiety/depression), spatial connectivity was also used as one of the independent variables in the model with the goals of omitting contextual bias.

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Annex 1: Value set for EQ-5D health states in Slovenia

State	VALUE
11111	1,000000
11211	0,742991
12111	0,719377
11121	0,717586
21111	0,712208
11112	0,706431
12211	0,68833
11221	0,68654
21211	0,681162
11212	0,675385
13111	0,665573
12121	0,662926
22111	0,657548
21121	0,655757
12112	0,651771
11122	0,64998
21112	0,644602
11113	0,641331
13211	0,634527
12221	0,63188
22211	0,626501
21221	0,624711
12212	0,620725
11222	0,618934
21212	0,613556
11213	0,610285
13121	0,609122
23111	0,603744
22121	0,601097
11311	0,60097
13112	0,597967
12122	0,59532
22112	0,589942
21122	0,588151
12113	0,586671
11123	0,58488
21113	0,579502
13221	0,578076
23211	0,572698
22221	0,570051
13212	0,566921
12222	0,564274
13113	0,559611
22212	0,558896
21222	0,557105
12213	0,555625
11223	0,553834
21213	0,548456
23121	0,547293
12311	0,546309
11321	0,544519
13122	0,541516
21311	0,539141
23112	0,536138
22122	0,533491
11312	0,533364
12123	0,53022
13213	0,528565
22113	0,524842
21123	0,523051
13311	0,51925
23221	0,516247
13222	0,51047
11131	0,507859
23212	0,505092
13123	0,503161
22222	0,502445
12223	0,499174
23113	0,497782
11313	0,495008
22213	0,493796
21223	0,492005
12321	0,489859
22311	0,48448
21321	0,48269
23122	0,479687
12312	0,478704
11322	0,476913
11231	0,476813
13223	0,472115
21312	0,471535
22123	0,468391
23213	0,466736
13321	0,462799
23311	0,457421
12131	0,453199
13312	0,451644
23222	0,448641
21131	0,44603
23123	0,441332
12313	0,440348
11132	0,440253
11323	0,438558
22223	0,437345
21313	0,433179
22321	0,42803
13131	0,426139
12322	0,422253
12231	0,422152
22312	0,416875
21322	0,415084
21231	0,414984
13313	0,413289
23223	0,410286
11232	0,409207
11133	0,401898
23321	0,40097
13322	0,395194
13231	0,395093
22131	0,39137
23312	0,389815
12132	0,385593
12323	0,383898
22313	0,378519
21132	0,378424
21323	0,376729
11233	0,370851
23131	0,36431
11331	0,361536
22322	0,360424
22231	0,360323
13132	0,358534
13323	0,356838
12232	0,354547
23313	0,35146
31111	0,348169
21232	0,347378
12133	0,347237
21133	0,340068
23322	0,333365
23231	0,333264
13232	0,327487
22132	0,323764
22323	0,322069
13133	0,320178
31211	0,317123
12233	0,316191
21233	0,309022
12331	0,306876
21331	0,299707
23132	0,296705
23323	0,295009
11332	0,293931
32111	0,293509
22232	0,292718
31121	0,291718
13233	0,289132
22133	0,285408
31112	0,280563
13331	0,279817
33111	0,266449
23232	0,265658
32211	0,262463
31221	0,260672
23133	0,258349
11333	0,255575
22233	0,254362
31212	0,249517
22331	0,245047
31113	0,242208
12332	0,23927
32121	0,237058
33211	0,235403
21332	0,232102
23233	0,227303
32112	0,225903
31122	0,224113
23331	0,217987
13332	0,212211
31213	0,211162
33121	0,209999
32221	0,206012
31311	0,201846
12333	0,200915
33112	0,198844
32212	0,194857
21333	0,193746
31222	0,193067
32113	0,187548
31123	0,185757
33221	0,178953
22332	0,177441
13333	0,173855
32122	0,169453
33212	0,167798
33113	0,160488
32213	0,156502
31223	0,154711
23332	0,150382
32311	0,147186
31321	0,145396
33122	0,142393
22333	0,139086
32222	0,138407
31312	0,134241
32123	0,131097
33213	0,129442
33311	0,120127
23333	0,112026
33222	0,111347
31131	0,108735
33123	0,104038
32223	0,100051
31313	0,095885
32321	0,090736
32312	0,079581
31322	0,07779
31231	0,077689
33223	0,072991
33321	0,063676
32131	0,054075
33312	0,052521
32313	0,041225
31132	0,04113
31323	0,039435
33131	0,027016
32322	0,02313
32231	0,023029
33313	0,014166
31232	0,010084
31133	0,002774
33322	-0,00393
33231	-0,00403
32132	-0,01353
32323	-0,01523
31233	-0,02827
31331	-0,03759
33132	-0,04059
33323	-0,04229
32232	-0,04458
32133	-0,05189
33232	-0,07164
33133	-0,07895
32233	-0,08293
32331	-0,09225
31332	-0,10519
33233	-0,10999
33331	-0,11931
31333	-0,14355
32332	-0,15985
33332	-0,18691
32333	-0,19821
33333	-0,22527

Annex 2: EQ-5D questionnaire on health states valuation (Slovene version)

EQ VPRAŠALNIK O VREDNOTENJU ZDRAVSTVENIH STANJ

S tem vprašalnikom želimo ugotoviti, kaj ljudje mislijo o zdravju. Opisali bomo nekaj možnih zdravstvenih stanj. Prosimo, da označite, kako dobra ali slaba bi bila ta stanja za osebo, podobno Vam. Zanima nas le *Vaše osebno mnenje*, pravilnih ali napačnih odgovorov zato ni.

Najprej Vas prosimo, da na naslednji strani označite, kakšno je Vaše zdravstveno stanje danes.

V vsaki od spodnjih skupin treh trditev označite tisti odgovor þ, ki najbolj ustrezno opiše Vaše počutje na današnji dan.

POKRETNOST

Pri hoji nimam nobenih težav. ☐
Pri hoji imam nekaj težav. ☐
Priklenjen-a sem na posteljo. ☐

SKRB ZASE

Zase poskrbim brez težav. ☐
Pri umivanju ali oblačenju imam nekaj težav. ☐
Ne morem se sam-a umivati ali oblačiti. ☐

VSAKDANJE AKTIVNOSTI *(npr. delo, študij, gospodinjska dela, družina, prosti čas)*

Vsakdanje aktivnosti mi ne povzročajo težav. ☐
Vsakdanje aktivnosti opravljam z nekaj težavami. ☐
Vsakdanjih aktivnosti nisem zmožen-na opravljati. ☐

BOLEČINA/NEUGODJE

Ne čutim bolečin oz. nimam občutka neugodja. ☐
Pestijo me zmerne bolečine ali občutki neugodja. ☐
Čutim nevzdržne bolečine ali skrajno neugodje. ☐

POTRTOST/TESNOBA

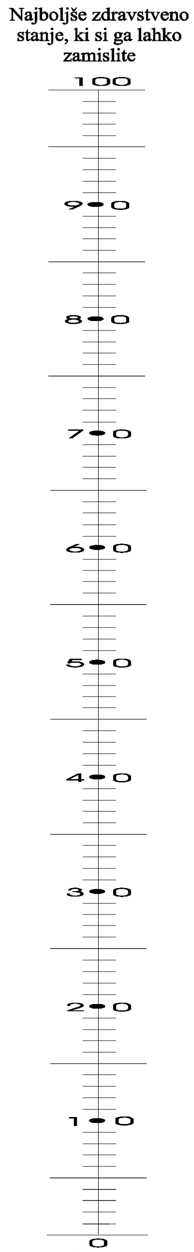
Nisem potrt-a ali tesnoben-na. ☐
Sem zmerno potrt-a ali tesnoben-na. ☐
Sem skrajno tesnoben-na ali depresiven-na. ☐

V primerjavi s svojim splošnim zdravstvenim stanjem v zadnjih 12 mesecih se danes počutim:
boljše ☐
približno enako ☐
slabše ☐
Prosimo, označite le eno izmed trditev.

Da bi Vam pomagali označiti, kako dobra ali slaba so določena zdravstvena stanja, smo izrisali lestvico, podobno termometru. Na njej smo s 100 označili najboljše zdravstveno stanje, ki si ga lahko zamislite, z 0 pa najslabše zdravstveno stanje, ki si ga lahko zamislite.

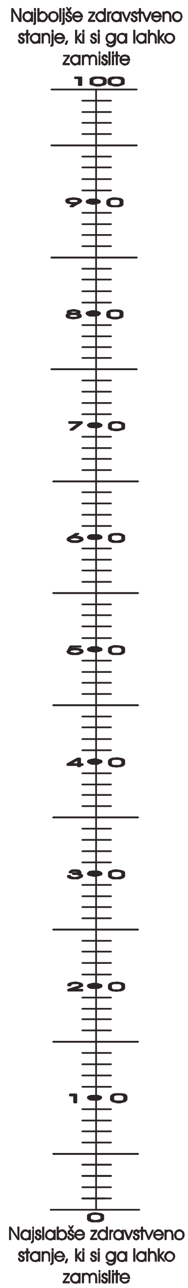
Prosimo, da na tej lestvici označite, kako dobro ali slabo je po Vašem mnenju Vaše zdravstveno stanje danes. To naredite tako, da od črnega pravokotnika spodaj povlečete črto do tiste točke na lestvici, ki najbolje označuje, kako dobro ali slabo je Vaše zdravstveno stanje na današnji dan.

Vaše zdravstveno stanje



- Zdaj Vas prosimo, da razmislite še o osmih zdravstvenih stanjih, ki so opisana na naslednji strani. V vsakem okvirčku je opisano eno zdravstveno stanje.
- Prosimo, da označite, kako slaba ali kako dobra bi bila ta zdravstvena stanja za osebo kot ste Vi.
- Zamislite si, da bi vsako opisano zdravstveno stanje doživljali eno leto. Kar se zgodi po enem letu, ni poznano in tega ne upoštevajte.

Iz vsakega okvirčka povlecite eno **črto** do tiste točke na lestvici od 0 do 100, ki po Vašem mnenju najbolje predstavlja, kako dobro ali slabo je zdravstveno stanje, opisano v tem okvirčku. Črte se med seboj lahko križajo.



Ni težav pri hoji
Ni težav pri skrbi zase
Nekaj težav pri vsakdanjih aktivnostih
(npr. delo, študij, gospodinjstvo, družina,prosti čas)
Ni bolečin ali občutkov neugodja
Ni potrtosti ali tesnobe

Ni težav pri hoji
Ni težav pri skrbi zase
Ni težav pri vsakdanjih aktivnostih
(npr. delo, študij, gospodinjstvo, družina, prosti čas)
Zmerne bolečine ali občutki neugodja
Ni potrtosti ali tesnobe

Ni težav pri hoji
Ni težav pri skrbi zase
Ni težav pri vsakdanjih aktivnostih
(npr. delo, študij, gospodinjstvo, družina, prosti čas)
Ni bolečin ali občutkov neugodja
Ni potrtosti ali tesnobe

Nekaj težav pri hoji
Nekaj težav z umivanjem ali oblačenjem
Nekaj težav pri vsakdanjih aktivnostih
(npr. delo, študij, gospodinjstvo, družina, prosti čas)
Nevzdržne bolečine ali skrajno neugodje
Skrajna potrtost ali tesnoba

Nekaj težav pri hoji
Ni težav pri skrbi zase
Nekaj težav pri vsakdanjih aktivnostih
(npr. delo, študij, gospodinjstvo, družina, prosti čas)
Nevzdržne bolečine ali skrajno neugodje
Zmerna potrtost ali tesnoba

Priklenjenost na posteljo
Nezmožnost umivanja ali oblačenja
Nezmožnost opravljanja vsakdanjih aktivnosti *(npr. delo, študij, gospodinjstvo, družina, prosti čas)*
Nevzdržne bolečine ali skrajno neugodje
Skrajna potrtost ali tesnoba

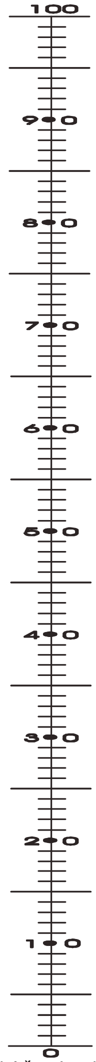
Ni težav pri hoji
Ni težav pri skrbi zase
Ni težav pri vsakdanjih aktivnostih
(npr. delo, študij, gospodinjstvo, družina, prosti čas)
Zmerne bolečine ali občutki neugodja
Zmerna potrtost ali tesnoba

Priklenjenost na posteljo
Nezmožnost umivanja ali oblačenja
Nezmožnost opravljanja vsakdanjih aktivnosti *(npr. delo, študij, gospodinjstvo, družina, prosti čas)*
Zmerne bolečine ali občutki neugodja
Ni potrtosti ali tesnobe

Prosimo, preverite, če ste vsak okvirček povezali z eno izmed točk na lestvici
(skupno osem črt)

Prosimo, da na enak način kot na prejšnji strani tudi na tej strani označite, kako dobra ali slaba se Vam zdijo navedena zdravstvena stanja. Zdravstveni stanji, označeni z znakom *, sta enaki dvema stanjema na prejšnji strani.

Najboljše zdravstveno stanje, ki si ga lahko zamislite



Najslabše zdravstveno stanje, ki si ga lahko zamislite

Nekaj težav pri hoji
Ni težav pri skrbi zase
Ni težav pri vsakdanjih aktivnostih
(npr. delo, študij, gospodinjstvo, družina,prosti čas)
Ni bolečin ali občutkov neugodja
Ni potrtosti ali tesnobe

Ni težav pri hoji
Ni težav pri skrbi zase
Ni težav pri vsakdanjih aktivnostih
(npr. delo, študij, gospodinjstvo, družina, prosti čas)
Ni bolečin ali občutkov neugodja
Zmerna potrtost ali tesnoba

Ni težav pri hoji *
Ni težav pri skrbi zase
Ni težav pri vsakdanjih aktivnostih
(npr. delo, študij, gospodinjstvo, družina, prosti čas)
Ni bolečin ali občutkov neugodja
Ni potrtosti ali tesnobe

Priklenjenost na posteljo
Nekaj težav z umivanjem ali oblačenjem
Nekaj težav pri vsakdanjih aktivnostih
(npr. delo, študij, gospodinjstvo, družina, prosti čas)
Ni bolečin ali občutkov neugodja
Ni potrtosti ali tesnobe

Nezavest

Priklenjenost na posteljo *
Nezmožnost umivanja ali oblačenja
Nezmožnost opravljanja vsakdanjih aktivnosti *(npr. delo, študij, gospodinjstvo, družina, prosti čas)*
Nevzdržne bolečine ali skrajno neugodje
Skrajna potrtost ali tesnoba

Ni težav pri hoji
Nekaj težav z umivanjem ali oblačenjem
Ni težav pri vsakdanjih aktivnostih
(npr. delo, študij, gospodinjstvo, družina, prosti čas)
Ni bolečin ali občutkov neugodja
Ni potrtosti ali tesnobe

Nekaj težav pri hoji
Nekaj težav z umivanjem ali oblačenjem
Nezmožnost opravljanja vsakdanjih aktivnosti *(npr. delo, študij, gospodinjstvo, družina, prosti čas)*
Zmerne bolečine ali občutki neugodja
Skrajna potrtost ali tesnoba

Prosimo, preverite, če ste vsak okvirček povezali z eno izmed točk na lestvici (skupno osem črt)

- Na prejšnjih dveh straneh smo Vas prosili, da po lastni presoji ocenite, kako dobra ali slaba se Vam zdijo navedena zdravstvena stanja.
- Zdaj bi želeli, da nam poveste, kako dobro ali slabo se Vam zdi stanje “mrtev” v primerjavi s prej opisanimi zdravstvenimi stanji, če si zamislite, da bi ta stanja doživljali eno leto.
- Prosimo, da na straneh 5 in 6 potegnete vodoravno črto čez lestvico v točki, kamor bi Vi uvrstili stanje “mrtev”.
- Ne pozabite stanja “mrtev” uvrstiti na straneh 5 in 6.

Ker so Vaši odgovori anonimni, Vas prosimo, da nam za njihovo lažje razumevanje zaupate nekaj podatkov. Za kakršnekoli dodatne komentarje in pripombe smo Vam na koncu ankete pustili nekaj praznega prostora.

PROSIMO, ODKLJUKAJTE!

1. Ste kdaj doživeli resno bolezen? Ne Da
- Vi sami ☐ ☐
- v Vaši družini ☐ ☐
- pri skrbi za druge ☐ ☐

2. Vaša starost v letih

3. Vaš spol M ☐ Ž ☐

4. Ali ste:
- kadilec-ka ☐
- bivši kadilec-ka ☐
- nikoli nisem kadil-a ☐

7. Ali ste kdaj delali na področju zdravstva ali socialnega skrbstva?
Da ☐
Ne ☐

Če da, kakšen je bil Vaš položaj?

6. Kakšna je Vaša delovna aktivnost?
- zaposlen-a ali samozaposlen-a ☐
- upokojen-a ☐
- gospodinja ☐
- študent-ka ☐
- iščem službo ☐
- drugo (prosimo, navedite)

7. Ali ste nadaljevali s šolanjem po osnovni šoli?
Da ☐
Ne ☐

8. Ali imate univerzitetno izobrazbo?
Da ☐
Ne ☐

9. Prosimo, da tukaj vpišete karkoli, kar bi pripomoglo k boljšemu razumevanju Vaših odgovorov:

---

10. Ali se Vam je zdelo izpolnjevanje ankete:
- zelo zahtevno ☐
- precej zahtevno ☐
- zahtevno ☐
- precej lahko ☐
- zelo lahko ☐

13. Prosimo, navedite, koliko časa Vam je vzelo izpolnjevanje vprašalnika (v minutah):

Vpišite Vašo poštno številko:

Najlepša hvala za Vaše sodelovanje in pomoč!