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DISPARITIES IN THE HEALTH OF IRISH REGIONS: FIRST ESTIMATES

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Abstract

We construct a composite index of the health status of the 8 HSE regions of Ireland in 2010. It has 6 component indices. Each maps the prevalence of health conditions for which a particular anatomical therapeutic chemical (ATC) group of drugs was prescribed and weights it by its prescribing frequency. We construct a separate composite health index for persons covered by each community drug scheme in each region and take the coverage-weighted average of these indices in each region as our overall composite health index.

The Midlands, North–West, Western and South-Eastern regions have below average health status; the remaining regions have above average health status. The Midlands region had the poorest health status in 2010 (8% below the national average) and the Eastern Area had the best (6% above the national average). Regional health disparities are related to but not adequately explained by simple socio-economic and demographic factors such as mean income and age differences alone.

Respiratory, Cardiovascular, Central Nervous System and 'Other' medical conditions differ greatly across regions and impact inter-regional health status most. Improving cardiac health offers the greatest scope for improving national health status. The single largest ATC health gap between any two regions is in Respiratory health status.

Introduction

The aim of this study is to construct composite indices of population health status in the 8 HSE regions of Ireland. Our composite index is sufficiently broad to enable inter-regional comparisons: its component indicators are sufficiently detailed to track the main sources of inter-regional difference. The indicators shorten the distance to the WHO ideal, set out below, and increase the tools available for policy analysis.

WHO (1984) describes health as "… the state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" and as a "… positive concept, emphasizing social and personal resources as well as physical capabilities". Health indicators are rooted in conceptual models of what influences health status[1] and help us in comparing the health status different geographic areas and regional populations and in mapping progress in meeting health goals. International[2], national [3]and regional[4] indicators abound whose composition and variety reflect their intended purpose and use. Established indicators[5], such as life expectancy, maternal and infant mortality rates, have standard definitions and widespread currency in benchmarking international comparisons of health status. Some analysts propose refining these simple indicators. Wolfson & Lievesely (2007), for example, propose refining the simple life expectancy index into a health-adjusted life expectancy (HALE) index that measures 'not merely the absence of death' but also the quality of health during the survival period. Others promote more broadly-based multidimensional composite indicators. For example, the World Bank combines the three dimensions of life expectation, knowledge and income into a single Human Development Index (HDI) that is closer to the WHO ideal.

[1] See Wold 2008.

[2] For example, the OECD and WHO.

[3] See, for example, Statistics Canada and the Canadian Institute for Health Information. The Health Protection Surveillance Group, HSE (2012) provides prevalence rates for specific diseases at regional level in Ireland. IPH provides disease prevalence rates at county level and CSO for 21 doctor diagnosed medical conditions.

[4] For example Manitoba Centre for Health Policy.

[5] Wold 2008, p.25 provides a list of indicators and data sources in common usage in the US.

Methods

The first step in constructing a composite index[6] is to settle its scope, that is, the number of dimensions it will contain. These are governed by purpose and use and are often pragmatically constrained by the data available for their construction. Our composite health index has 6 dimensions. Each dimension refers to a set of health conditions for which one of six anatomical therapeutic chemical (ATC) group of drugs[7] is prescribed; that is, (i) Alimentary Tract and Metabolism (ii) Cardiovascular system (iii) Nervous system (iv) Respiratory system (v) Various and (vi) 'Other' (the remaining 9 first level ATC groups, combined).

Table 1 sets out the share of the 6 ATC categories in each of the 3 community schemes: the 24 therapeutic drug groups covered in constructing the KL Index account for circa 80% of all community drug prescriptions in 2010 (Appendix, Table A1 gives the breakdown). We assigned one or more health indicators to each of the 24 therapeutic groups that comprise the 6 ATC categories (see Appendix, Table A2). The 28 indicators we used comprise the prevalence rates of 18 medical conditions and 10 other health indicators, where doctor-diagnosed indicators were unavailable.

We used regional indicators where they were available; otherwise we aggregated county level data. We multiplied the county-to-national prevalence rate ratio of *each* county indicator by 100 to obtain its county index value. We then aggregated *county-level* index values on a population-weighted basis to obtain regional index numbers. By construction, Ireland has a reference value of 100.

Indicator values refer to 2010, where available; otherwise to the nearest available year and CSO values were adjusted to conform to HSE-defined Irish regions. Table A2 Appendix gives full details and data sources.

Where several health indicators were available for the *same* therapeutic group of drugs we used their geometric mean. For example, the 'Drugs for bone disease' therapeutic group is prescribed for clinically diagnosed back conditions, osteoarthritis and osteoporosis: their geometric mean $p_{bone} = \sqrt[3]{p_{back} * p_{osteoarth} * p_{osteopor}}$ is our composite 'bone disease' indicator.

[6] Gaye (2007) sets out the steps to be taken in constructing composite indices.
[7] These are WHO first level ATC therapeutic group categories. For a brief history of the ATC classification system see http://www.whocc.no/atc_ddd_methodology/history/

We used geometric prescribing weights to aggregate health sub-index values both within and across the 6 ATC categories. For example, the 'Other' ATC sub-index contains 5 therapeutic drug groups and has the form, $I_o = \prod_{i=1}^{5} p_i^{w_i} = (p_1)^{w_1}(p_2)^{w_2}(p_3)^{w_3}(p_{bone})^{.0801}(p_{rheu})^{.1781}$, where p_{bone} is the prevalence of 'bone disease' in the region relative to the nation and other p values are similarly defined. PCRS data[8] show that in 2010 'Drugs for Bone Disease' accounted for 8.01% and that 'anti-inflammatory and rheumatic' medicines accounted for 17.81% of GMS prescriptions in the 5 groups of medicines in the 'Other' ATC category; hence, $w_4 = .0801$, $w_5 = .1781$ and $\sum_{i=1}^{5} w_i = 1$.

We constructed a composite GMS health indicator from the geometric average of the 6 ATC sub indices, $I = \prod_{j=1}^{6} I_j^{w_j} = (I_1)^{w_1}(I_2)^{w_2}(I_3)^{w_3}(I_4)^{w_4}(I_5)^{w_5}(I_6)^{w_6}$, where the weights are the GMS prescribing shares of each ATC group, as set out in Table 1.

We then repeated the exercise, using the weights set out in Table 1 and Table A1 to derive separate composite health indicators for the remaining DP and LTI community drug schemes.

[8] Primary Care Reimbursement Service (PCRS), Statistical Analysis of Claims and Payments 2010, Table 20, pg 101.

Table 1. Prescribing Frequencies by Anatomical Group & Drug Scheme[9] in 2010.

Anatomical Therapeutic Chemical Classification	GMS	DP	LTI
Alimentary Tract & Metabolism Total Share (%)	***13.64***	***11.99***	***26.44***
Total % of which represented by KL Composite Health Index	86%	82%	96%
Cardiovascular System Total Share (%)	***24.03***	***27.01***	***30.88***
Total % of which represented by KL Composite Health Index	90%	93%	96%
Nervous System Total Share (%)	***19.44***	***15.47***	***10.52***
Total % of which represented by KL Composite Health Index	94%	96%	89%
Respiratory System Total Share (%)	***7.47***	***9.55***	***0.47***
Total % of which represented by KL Composite Health Index	91%	96%	89%
Various Total Share (%)	***3.02***	***1.98***	***17.64***
Total % of which represented by KL Composite Health Index	98%	98%	100%
Other Total Share (%)	***32.4***	***34.00***	***14.05***
Total % of which represented by KL Composite Health Index	55%	55%	82%
Total ATC Category Value (%)	***100%***	***100%***	***100%***
Overall Total % of drugs prescribed represented by KL Index	79%	80%	94%
Total Items Prescribed	***54,424,660***	***11,070,446***	***2,807,757***

Finally, we geometrically weighted each region's scheme-specific composite health indicators, using its scheme coverage rates as weights set out in Table 2, to derive its overall composite health index. For example, 28%, 68% and 4%, respectively, of the East region population was covered by the GMS scheme, the DP scheme and LTI schemes respectively, so we applied these geometric weights to its scheme-specific index values to obtain its overall composite health index. We refer to the latter, for convenience, as the KL Index.

[9] Primary Care Reimbursement Service (PCRS), Statistical Analysis of Claims and Payments 2010, Tables 20, 20.1, 20.2.

The relative frequencies of the major health conditions that the KL Index embeds reflects each region's epidemiology and the prescribing weights that its assigns to these conditions reflect the prescribing patterns and regional coverage rates of Ireland's community drug schemes.

Table 2. Scheme Coverage Rates and National Prescribing Frequencies by Region in 2010

Region/ Scheme Coverage Rates S_j	**GMS**	**DP***	**LTI**	**Total**
1.Eastern Area	0.28	0.68	0.04	1.00
2. Midlands	0.38	0.59	0.03	1.00
3. Mid-West	0.38	0.60	0.02	1.00
4. North-East	0.38	0.59	0.03	1.00
5. North-West	0.49	0.47	0.03	1.00
6. South-East	0.41	0.56	0.03	1.00
7. Southern	0.36	0.62	0.02	1.00
8. Western	0.41	0.57	0.02	1.00
Ireland	0.35	0.62	0.03	**1.00**

*Persons not covered by the GMS are covered by the DP scheme. We assigned covered but unregistered persons (i.e. those with medicines bills under €120/month entitlement threshold) to the DP scheme.

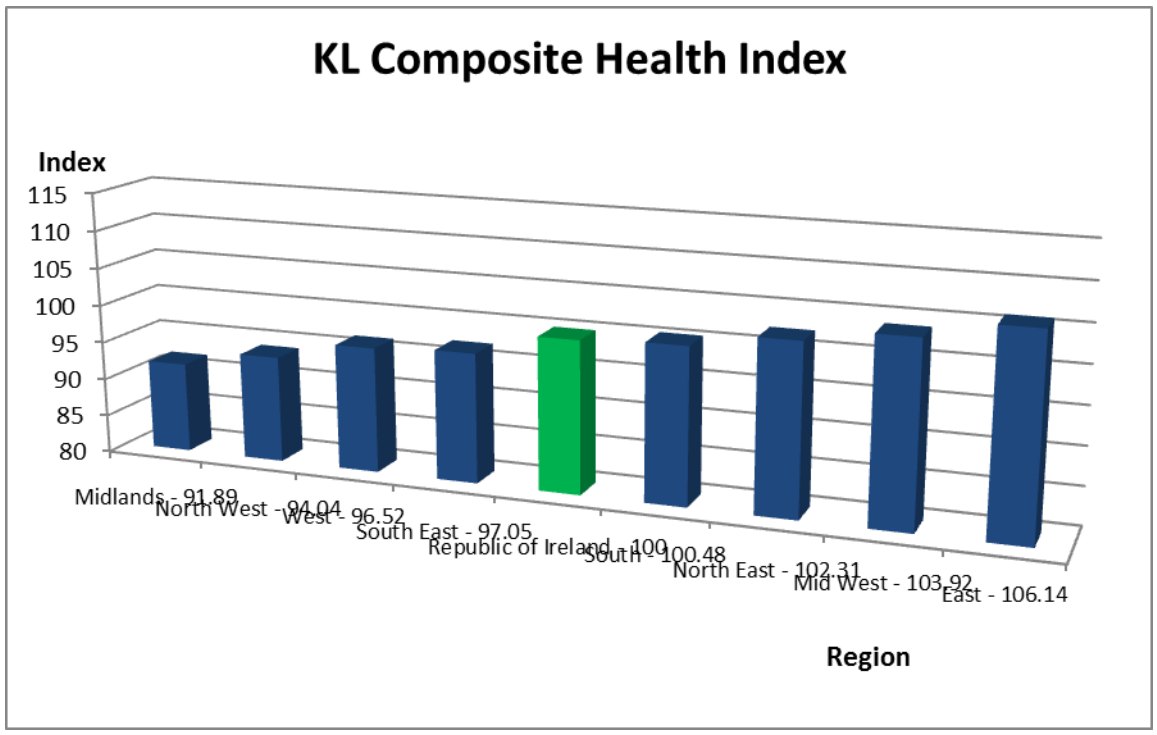
**We assigned the 54,974 HTD registered persons in 2010 (PCRS 2010 p.14) to each region in proportion to that region's share of HDT items prescribed (PCRS 2010 p.15).

Results

Figure 1 plots each region's overall KL Index values in ascending order. Ireland has a benchmark value of 100: low values signify good health and high values poor health. The Midlands, North –West, Western and South-Eastern regions have below average health status; the remaining regions have above average health status (for details see Table A4).

The Eastern Area[10] has the best health status (6% better than the national average). It has consistently good health in each ATC category, ranking best in 3 of the 6 categories – Alimentary Tract, Cardiovascular and Other. The Midlands[11] has the poorest health status; (8% below the national average) and ranks bottom in 4 out of 6 ATC categories - Cardiovascular, Nervous system, Respiratory system and 'Other'.

Figure 1



10 i.e. counties Kildare, Wicklow, Dublin (including Dun Laoghaire/Rathdown, Dublin City, Fingal and South Dublin)

11 i.e. counties Laois, Longford, Offaly and Westmeath

The biggest regional gap (14.25%) in health status is between Eastern Area and the Midlands. Figure 2 (see Table A3) breaks this gap down by each ATC component. The biggest ATC gap between the two regions is in cardiovascular health status (23%). Because cardiovascular health has a high KL Index weight of 26% it accounts for around 42%[12] of the overall 14.25% health gap between these two regions.

The Midlands/Eastern Alimentary, Central Nervous System and 'Other' ATC health gaps are 4.75%, 10.79% and 13.10%, respectively. They contribute over 40% of the 14.25% overall Midlands/Eastern health gap. Respiratory and 'Various' ATC health gaps contribute the remaining difference.[13]

Figure 2

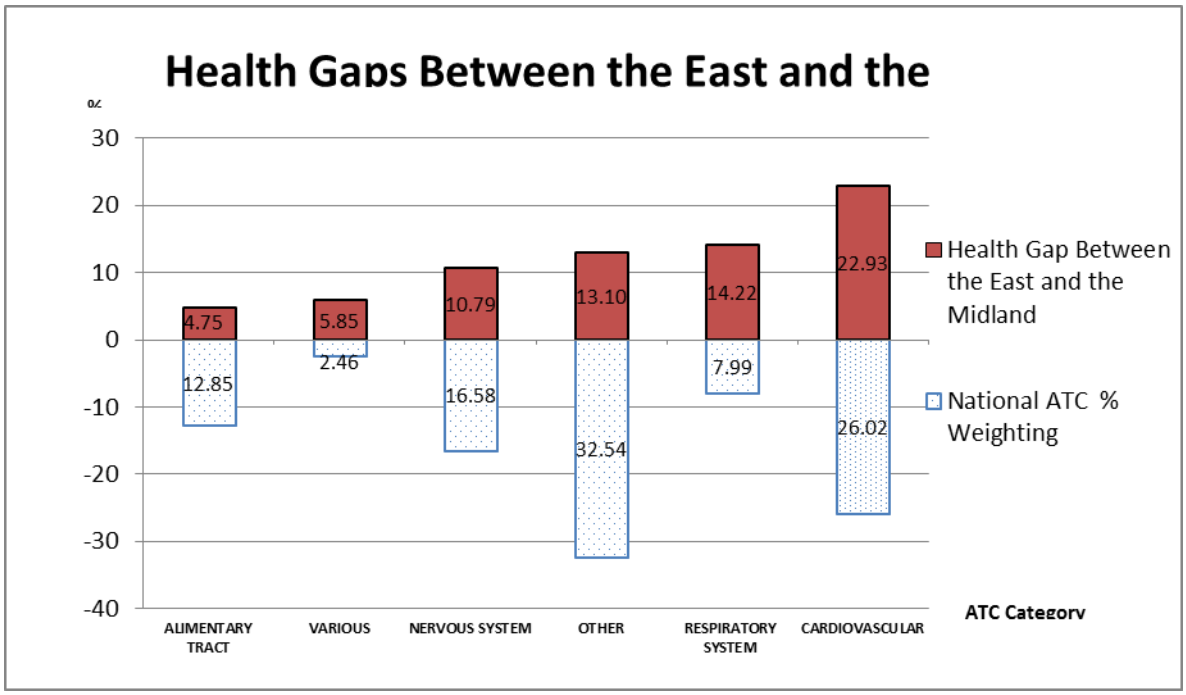


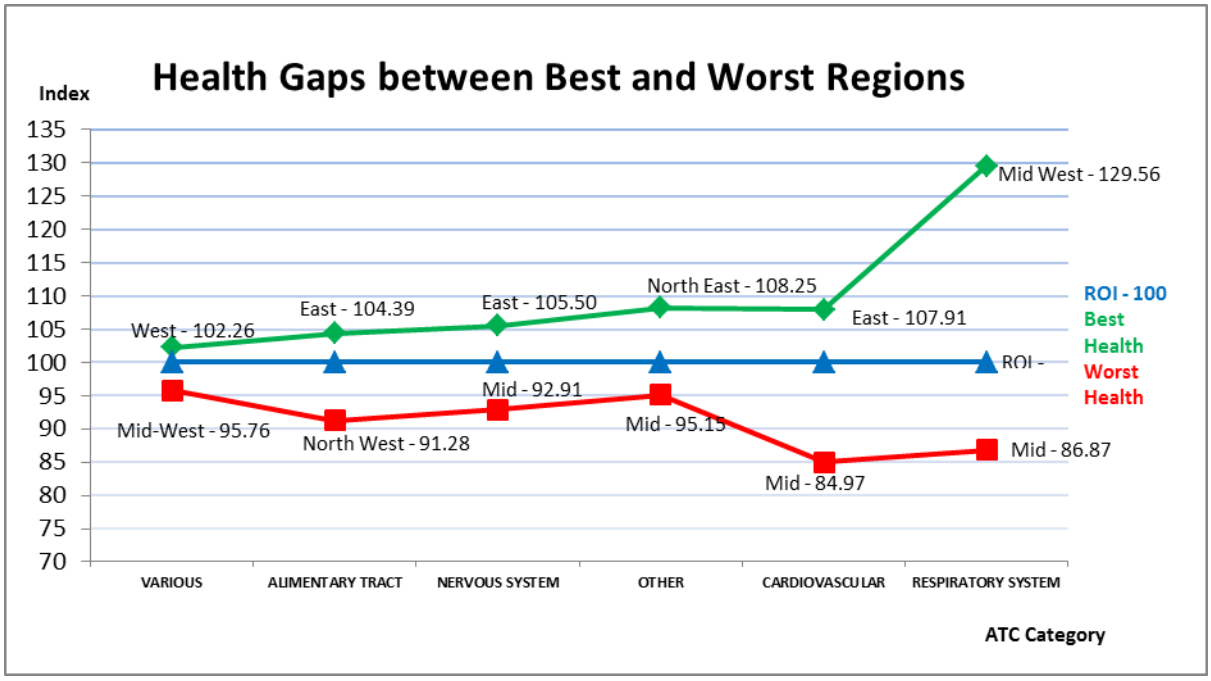
Figure 3 identifies the regions with the best and the worst health status in each ATC category and the size of the gaps between them. Respiratory health displays the greatest single ATC health gap but, as noted above, it has a low KL Index weight of 7.99%, which lessens its contribution to overall inter-regional health gaps. Sizable inter-regional gaps also exist in

[12] See Table C in Appendix
[13] See Table C in Appendix

mental (CNS) and cardiovascular health and because they have high index weights they contribute significantly to inter-regional health gaps.

Figure 3 highlights the fact that the Midlands has the worst health status in 4 of the 6 ATC categories, whereas 4 different regions share the best health status in the 6 ATC categories. The East region has the best health status in 3 high weighted ATC categories; Alimentary Tract, CNS and Cardiovascular. Note also that while the Mid-West has the second best overall health status, it has best status in only 1 ATC category – Respiratory health - which has a low index weight.

Figure 3



Discussion

It is tempting but premature to attribute specific health gaps to specific causes. The Midlands, for example, has high rates of asthma and respiratory ill-health that may partly reflect its status as the sole non-coastal inland region with inland regional climate. But such specific accounts leave its generally poor health status inadequately explained (e.g. it has very high rates of cholesterol, hospital admissions for circulatory disease and cardiovascular ill-health).

It is similarly tempting to advance general causes of the observed differences in inter-regional health. Table 3 shows, for example, that good health is well correlated with regional income. Surprisingly, it is better correlated with unadjusted disposable income per capita ($R^2 = 0.74$) than it is with equivalised net disposable income ($R^2 = 0.53$) even though the latter has been adjusted to reflect family size and composition.

It is also inversely and moderately well correlated ($R^2 = .54$) with regional demography i.e. the share of each region's population that is aged over 65.

Table 3: Correlation between Health Status, Income and Age

	Disposable Income	Equivalised-Income	Population Percent over 65	KL Index
Disposable Income	1.00	0.70	-0.22	0.74
Equivalised-Income		1.00	-0.59	0.53
Population Percent over 65			1.00	-0.54
KL Index				1.00

Income refers to CSO county incomes; equivalised income refers to SILC family-size adjusted incomes. See Appendix Table C

However, these key demographic and socio-economic variables, at best, provide a partial and incomplete account of regional variations in good health because the pattern of its causality is complex. For example, the four regions with below-average health status – the Midlands, North-West, West[14], and South East - have below average incomes and, with the exception of the Midlands, they tend to have above average population shares aged over 65 (see Table A4). They lure us into citing poor socio-economic conditions and unfavourable demographics as general causes of inter-regional ill-health.

However, while regions with low income and poor demographics tend to have the poorest health this is not always so. For example, while the Eastern region has the best health status, highest income and lowest elderly population share, the Mid-West region, which ranks

[14] These 3 regions broadly conform to the NUTS 2 BMW i.e. the Border (Cavan, Donegal, Leitrim, Louth, Monaghan and Sligo), Midlands (Laois, Longford, Offaly and Westmeath) and West (Galway city and county, Mayo and Roscommon) regions.

second, has disposable per capita income of €1,200 less than the East and a population share aged over 65 (i.e. 11.8%) that is nearly 2 percentage points higher than the East. Similarly, although net disposable income is €1,400 more in the West than in the Midlands region the West has substantially less favourable demographics but has a noticeably better health status.

Socio-economic and demographic influences are 'smudged' and confounded by diet, life-style, primary care access and other medical access variables that have a significant role and exert threshold non-linear effects on health status. For example, despite having the worst health status of any region only 38% of its population was covered by the GMS scheme, a full 11 percentage points less than the 49% covered in North West region. The Midlands population had appreciably relatively impaired access to GMS health services vis-à-vis the North-West, which may retard improvements in its health status.

Conclusions

The KL Index adopts World Bank, UNDP and EU index construction methodology and conforms to their guidelines (Gaye 2007; IMF, 2010; OECD 2008). Sample data for the 28 health indicators it uses are sampled and published by the IPH, CSO and PCRS, frequently at county level. We make these observations;

First, we recognize that by measuring ill-health rather than health and excluding positive medical interventions, such as immunization, the KL Index falls short of the World Bank ideal. A notable technical deficit is the lack of a key health indicator for 'Alimentary Tract and Metabolism'.

Second, there is a case for applying prescribing *value* rather than prescribing *frequency* weights in constructing the Index but both yield broadly similar and robust Index values.

Third, as with any summary index, the sample weights and coverage might fruitfully be modified to suit their intended application. For example, to map primary care need might entail expanding and re-weighting the Index to include pregnancy and immunization services. Similarly, one might wish to drill down to its disaggregated components, for example in case studies of causes of the different diabetic prevalence rates in Irish counties.

Fourth, the KL Index under-represents conditions that do not use drug therapy and it excludes hospital-originated HTD prescribing (e.g. in Antineoplastic & Immunomodulating Agents drugs group).

Fifth, we found sizable disparities in overall health status of Irish regions and we tabulated the main types and prevalence rates of health conditions underlying these disparities. Cardiovascular health has the largest KL Index weight and offers the greatest scope for improving national health status.

Sixth, we cannot, yet, isolate the separate contributions that socio-economic, demographic, lifestyle and medical causes make to health status and, until we construct an Index time series, we cannot assess how health status responds over time to changes in these variables. The Index is a first step in paving the way to these goals. For example, it plays a critical role in explaining differences in inter-regional prescribing reates (Kenneally and Lynch 2013b).

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APPENDIX

Table A1. ATC Therapeutic Drug Group Shares in GMS, DP & LTI Medicine Baskets

Anatomical Therapeutic Chemical Classification	**GMS**	**DP**	**LTI**
Alimentary Tract & Metabolism Total *(of which)*	***13.64***	***11.99***	***26.44***
1. Drugs for Acid related Disorders	*6.02*	6.6	0.68
2. Drugs for Diabetes	*2.35*	0.51	24.2
3. Laxatives	*1.4*	0.67	0.26
4. Mineral Supplements	*1.93*	2.01	0.24
Therapeutic Groups as a % of Anatomical Group	**86%**	**82%**	**96%**
Cardiovascular System Total *(of which)*	***24.03***	***27.01***	***30.88***
1.Lipid Modifying Agents	6.47	9.56	11.19
2.Renin-Angiotensin Agents	5.85	7.27	10.68
3.Calcium Channel Blockers	2.52	2.51	2.92
4. Beta Blocking Agents	3.74	4.08	3.27
5. Diuretics	3.11	1.81	1.51
Therapeutic Groups as a % of Anatomical Group	**90%**	**93%**	**96%**
Nervous System Total *(of which)*	***19.44***	***15.47***	***10.52***
1. Psychoanaleptics	4.59	4.64	0.55
2. Psycholeptics	6.85	5.16	0.67
3. Anti-epileptics	1.98	1.57	7.9
4. Analgesics	4.76	3.42	0.26
Therapeutic Groups as a % of Anatomical Group	**94%**	**96%**	**89%**
Respiratory System *(of which)*	***7.47***	***9.55***	***0.47***
1. Drugs for Obstructive Airways	5.4	6.78	0.32
2. Nasal Preparations	0.65	1.3	0.05
3. Antihistomines	0.75	1.11	0.05
Therapeutic Groups as a % of Anatomical Group	**91%**	**96%**	**89%**

Various Total *(of which)*	***3.02***	***1.98***	***17.64***
1. Clinical Nutritional Products	1.1	0.96	1.26
2. Other Non-Therapeutic Products	1.04	0.82	6.26
3. Diagnostic Products	0.83	0.17	10.11
Therapeutic Groups as a % of Anatomical Group	**98%**	**98%**	**100%**
Other Total *(of which)*	***32.4***	***34.00***	***14.05***
1. Antithrombotics	6.9	6.86	9.72
2. Urologicals	1.7	1.85	1.03
3. Antibacterials for Systemic Use	4.64	4.2	0.52
4. Drugs for Bone Disease	1.43	1.6	0.08
5. Anti-inflammatory and Rheumatic	3.18	4.05	0.15
Therapeutic Groups as a % of Anatomical Group	**55%**	**55%**	**82%**
Therapeutic Groups as a % of Total Prescribed Items	**79%**	**80%**	**94%**
Total Items Prescribed	***54,424,660***	***11,070,446***	***2,807,757***

Table A2. Therapeutic Main Group Indicators Used to Construct the KL Index

Therapeutic Main Groups	**Indicators and Sources**
1. Drugs for Acid Related Disorders	(i) Population % aged 50 and over[17]
2. Drugs for Diabetes	(i) Clinical diagnosis of self-reported, doctor-diagnosed diabetes in the previous 12 months (RoI 2010)[15]
3. Laxatives	(i) Percentage of people who are physically inactive (RoI, 2007)[15]
4. Mineral Supplements	(i) Percentage of children aged 0-5 years (2011) [15]
Cardiovascular System Total	
5.Lipid Modifying Agents	(i) Percentage of people being prescribed statins (RoI 2005) [15] (ii) Percentage of people who have high cholesterol, (RoI 2007) [15]
6.Renin-Angiotensin Agents	(i) Directly age and gender standardised rate per 100,000 European Standard Population of operations for CABG/angioplasty, (RoI 2010) [15] (ii) Rate of admissions to hospital for circulatory diseases per 100,000 European standard population, (RoI 2010) [15] (iii) Clinical diagnosis of Self-reported, doctor-diagnosed hypertension in the previous 12 months, (RoI 2010) [15]
7.Calcium Channel Blockers	(i) Clinical diagnosis of Self-reported, doctor-diagnosed hypertension in the previous 12 months, (RoI 2010) [15] (ii) Clinical diagnosis of Self-reported, doctor-diagnosed angina or heart attack in the previous 12 months, (RoI 2010) [15]
8. Beta Blocking Agents	(i) Rate of admissions to hospital for circulatory diseases per 100,000 European standard population, (RoI 2010) [15]
9. Diuretics	(i) Clinical diagnosis of Self-reported, doctor-diagnosed hypertension in the previous 12 months, (RoI 2010) [15]
Nervous System Total	
10. Psychoanaleptics	(i) Percentage of the population in receipt of prescriptions for depression and/or anxiety, (RoI 2005) [15] (ii) Number of admissions to hospital for anxiety or depression per 1,000 people, (RoI 2009) [15] (iii) The percentage of people suffering from mood and anxiety disorders estimated using prescription data, (RoI 2005) [15]
11. Psycholeptics	(i) The percentage of people suffering from mood and anxiety disorders estimated using prescription data, (RoI 2005) [15] (ii) The percentage of people who currently smoke cigarettes,(RoI 2007) [15]
12. Anti-epileptics	(i) Percentage of the working age population aged 15-64 years in receipt of benefits for depression and/or anxiety, (RoI 2010) [15] (ii) Percentage of working population aged 15-64 years in receipt of benefits for mental and behaviour disorders, (RoI 2010) [15]
13. Analgesics	(i) Percentage of adults diagnosed with osteoarthritis[16]

[15] Healthwell, Institute of Public Health in Ireland (IPH), Community Profile
http://www.thehealthwell.info/communityprofiles/area/area.php
[16] The Quarterly National Household Survey (QNHS), Health Status and Health Service Utilisation for Quarter 3 2010, Table 3
[17] The Healthwell, Department of Health, PHIS, http://www.thehealthwell.info/phis-tables

Respiratory System (*excludes indicator for Antihistamines)	
14. Drugs for Obstructive Airways Diseases	(i) Percentage of adults diagnosed with asthma[16] (ii) Percentage of adults diagnosed with chronic bronchitis[16]
15. Nasal Preparations	(i) Clinical diagnosis of Self-reported, doctor-diagnosed chronic bronchitis, chronic obstructive lung (pulmonary) disease, or emphysema in the previous 12 months, (RoI 2010) [15] (ii) The percentage of people suffering from mood and anxiety disorders estimated using prescription data, (RoI 2005) [15]
16. Antihistamines	
Various	
17. Clinical Nutritional Products	(i) Birth rate (2005 – 2010)[17]
18. Other Non-Therapeutic Products	(i) Percentage of adults with 1 or more admission to hospital[16] (ii) Clinical diagnosis of self-reported, doctor-diagnosed diabetes in the previous 12 months (RoI 2010) [15] (iii) Average number of GP consultations (including no visits) [16] (iv) Percentage of adults diagnosed with urinary incontinence[16]
19. Diagnostic Products	(i) Percentage of adults with 1 or more admission to hospital[16] (ii) Clinical diagnosis of self-reported, doctor-diagnosed diabetes in the previous 12 months (RoI 2010) [15]
Other (*excludes indicator for Anti-bacterials for Systemic Use)	
20. Antithrombotic Agents	(i) Directly age and gender standardised rate per 100,000 European Standard Population of operations for CABG/angioplasty, (RoI 2010) [15] (ii) Rate of admissions to hospital for circulatory diseases per 100,000 European standard population,(RoI 2010) [15] (iii) Clinical diagnosis of Self-reported, doctor-diagnosed hypertension in the previous 12 months, (RoI 2010) [15]
21. Urologicals	(i) Percentage of adults diagnosed with urinary incontinence [16]
22. Anti-bacterials for Systemic Use	
23. Drugs for Bone Diseases	(i) Percentage of working population aged 15-64 years in receipt of benefits for diseases of the musculoskeletal system, (RoI 2010)[15] (ii) Clinical diagnosis of Self-reported, doctor-diagnosed osteoarthritis (arthritis, joint degradation) in the previous 12 months, (RoI 2010)[15] (iii) Percentage of adults diagnosed with osteoporosis[16]
24. Anti-inflammatory & Anti-rheumatic Products	(i) Clinical diagnosis of Self-reported, doctor-diagnosed rheumatoid arthritis (inflammation of the joints) in the previous 12 months, (RoI 2010) [15]

Table A3. ATC Component Breakdown of Midlands-East region Health Gap

ATC Group	Alimentary	Cardio	CNS	Respiratory	Various	Other	Total
1.Health Gap	4.75	22.93	10.79	14.22	5.85	13.10	**14.25%***
2. Scheme Weight (GMS, DP and LTI)	13	26	17	8	3	33	**100%***
3=Health Gap X Weight. Contribution	0.62%	5.97%	1.83%	1.14%	0.18%	4.32%	**14%***
% of Total 14,25% Gap	4.5%	42%	12.8%	8%	1.4%	30.03%	**98.73%***

***** Any differences due to rounding

Table A4. Income, Equivalised Income and Population over 65 in 2010

Region	Health Status: KL Index Value	Disposable Income (€ '000s p.a.)	Equivalised Income (€ '000s)	Percentage aged over 65
Mid-West	103.92	19.1	19.7	11.80
East	106.14	20.3	25.4	10.00
North East	102.31	17.3	19.3	10.00
South	100.48	19.2	19.3	12.00
South East	97.05	18.1	19.2	12.00
Republic of Ireland	**100.00**	**19.3**	**22.2**	**11.10**
North West	94.04	17.3	19.3	13.00
West	96.52	18.5	19.5	12.30
Midlands	91.89	17.1	20.1	11.00

Disposable Income refers to CSO county incomes; equivalised income refers to SILC family-size adjusted incomes.