Centre for Policy Studies
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Coping with Recession – A Regional Perspective

Regional Health Profiles and their Policy Implications

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Objectives

- Profile the 2010 Health Status of 8 Irish Regions
- Model Regional Prescribing
- Simulate effects on Prescribing Rates & Costs
- Highlight major policy issues arising
- Explain the constraints, choices & stance of Irish Health policy

8 Irish HSE Regions and their Counties

- **East:** Dublin, Kildare, Wicklow
- **Midlands:** Laois, Longford, Offaly, Westmeath
- **Mid West:** Clare, Limerick, North Tipperary
- **North East:** Cavan, Louth, Meath, Monaghan
- **North West:** Donegal, Leitrim, Sligo
- **South East:** Carlow, Kilkenny, South Tipperary, Waterford, Wexford
- **South:** Cork, Kerry
- **West:** Galway, Mayo, Roscommon

Community Drug Schemes in Ireland

Eligibility

- **General Medical Services (GMS)** – means tested, allowance for expenses such as mortgage, childcare etc. Also if medical costs cause undue financial hardship.

- **Drug Payment Scheme (DP)-** An individual or family pays first €144 each month for approved prescribed drugs.

- **Long Term Illness (LTI)** – Not means tested. Includes - Cerebral Palsy, Spina Bifida, Acute Leukaemia, Multiple Sclerosis, Diabetes and Epilepsy

- *Also*
- **High Tech Drug Scheme (HTD) –** usually hospital administered e.g. Anti rejection drugs for transplants, and chemotherapy

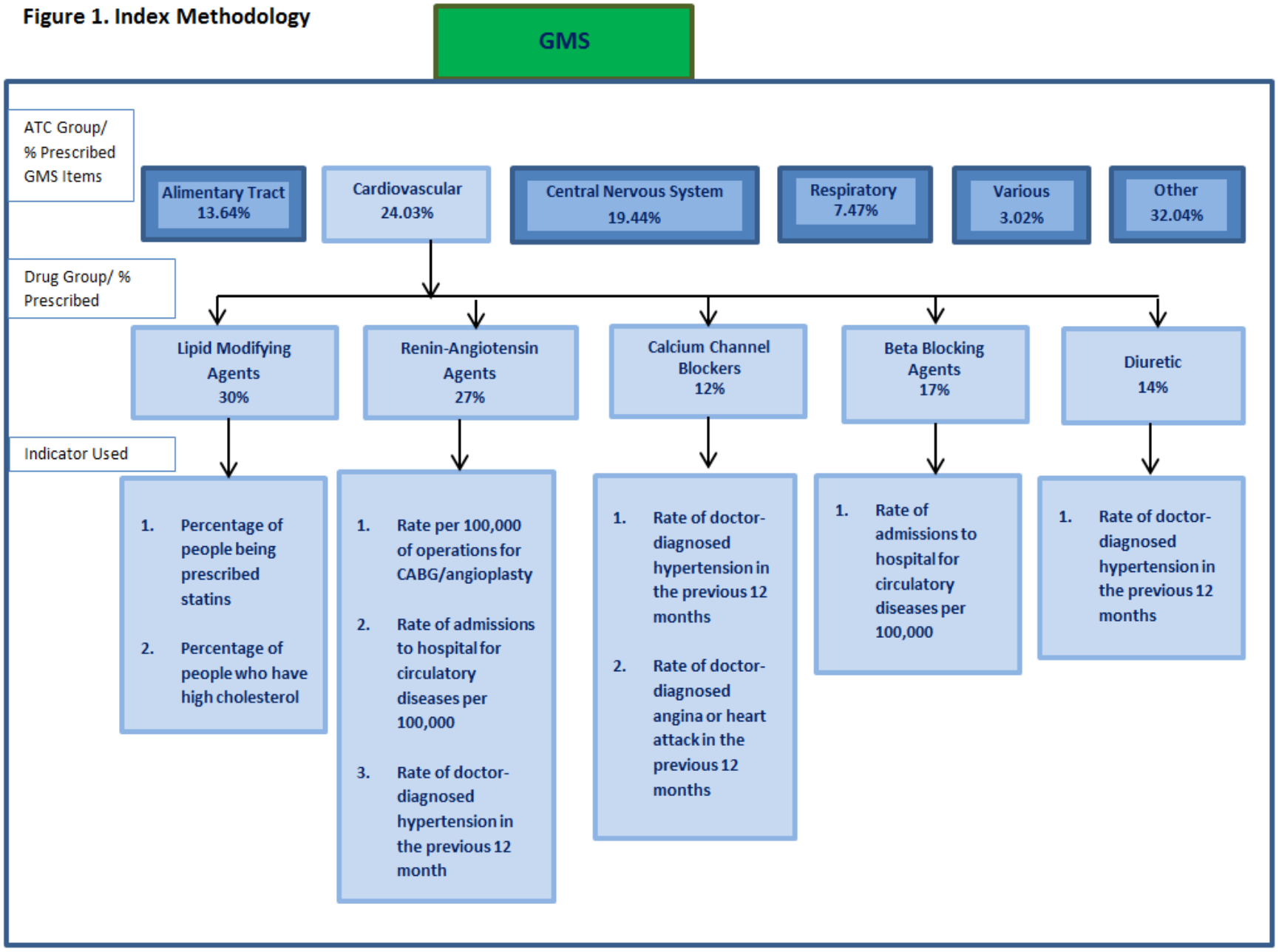
Scheme Population Percentages 2010

	% of Pop: GMS	% of Pop: DP	% of Pop: LTI	% of Pop: HTD
Ireland	**35**	**61**	**3**	**1**
1.East	28	67	4	1
2. Midlands	38	58	3	1
3. Mid-West	38	59	2	1
4. North-East	38	58	3	1
5. North-West	49	47	3	1
6. South-East	41	55	3	1
7. South	36	61	2	1
8. West	41	56	2	1

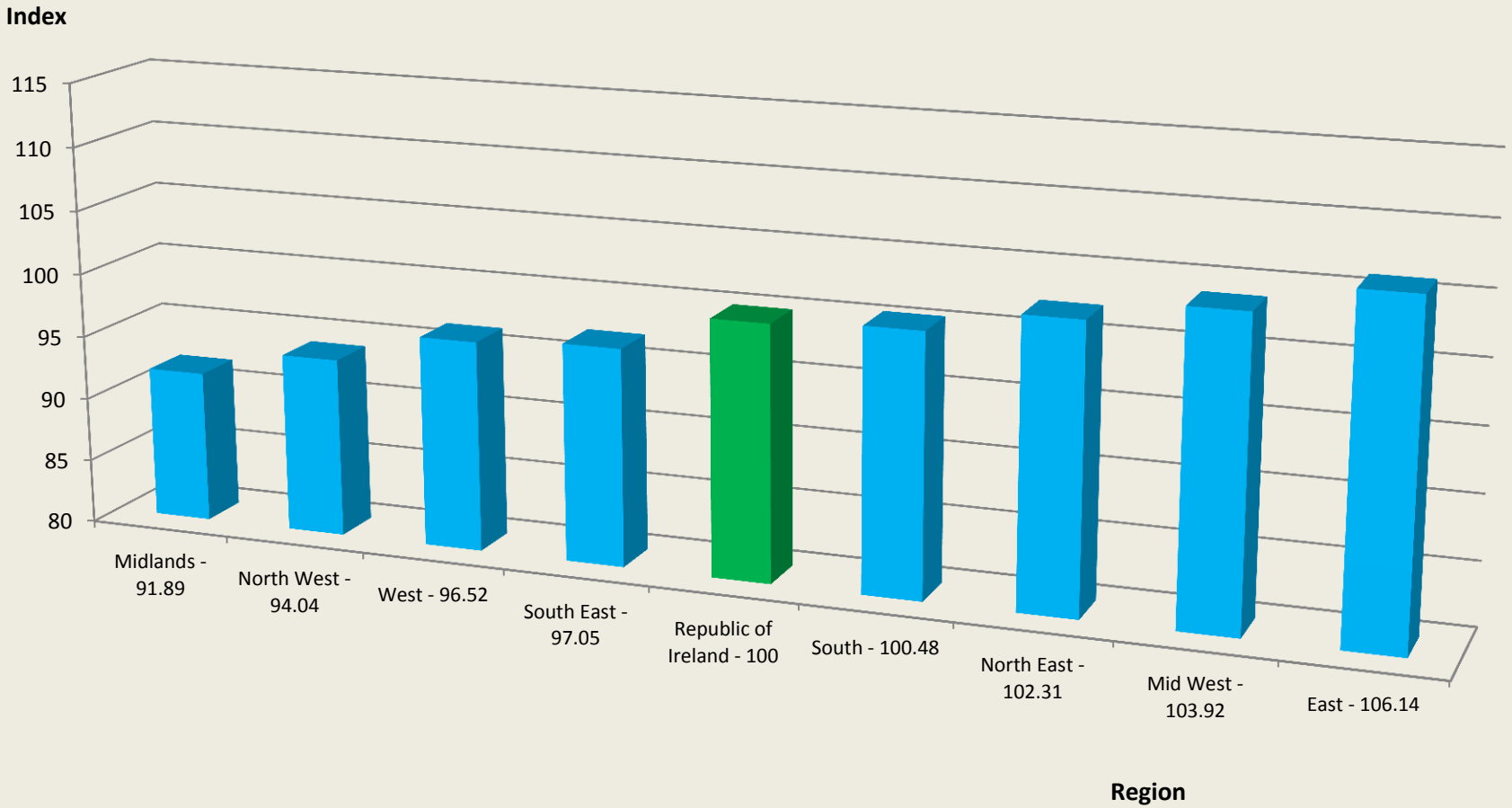
Methodology

- 6 Major Health Categories were divided into 24 sub-groups
- Composite Regional Health Indicators identified for each group (18 prevalence rates/10 others)
- We constructed prescription weighted Composite Health Indices for each scheme in each ATC category and region.
- Index value = $\frac{NationalMorbidityRate}{RegionalMorbidityRate} * 100$ for each [Ireland = 100]
- Scheme Index values summed for each region
- Regional Health Index = summed Regional Scheme Indices

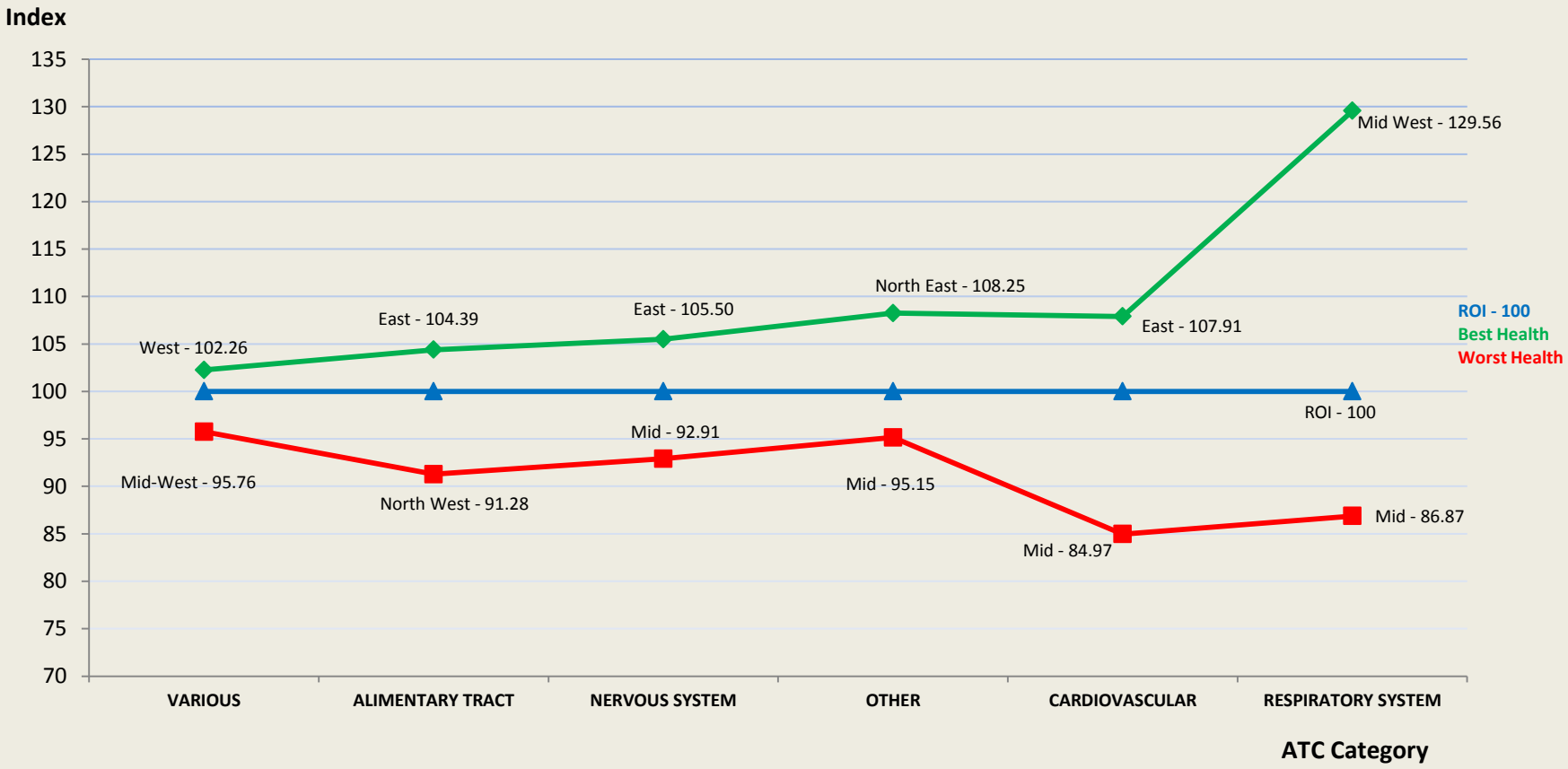
Figure 1. Index Methodology



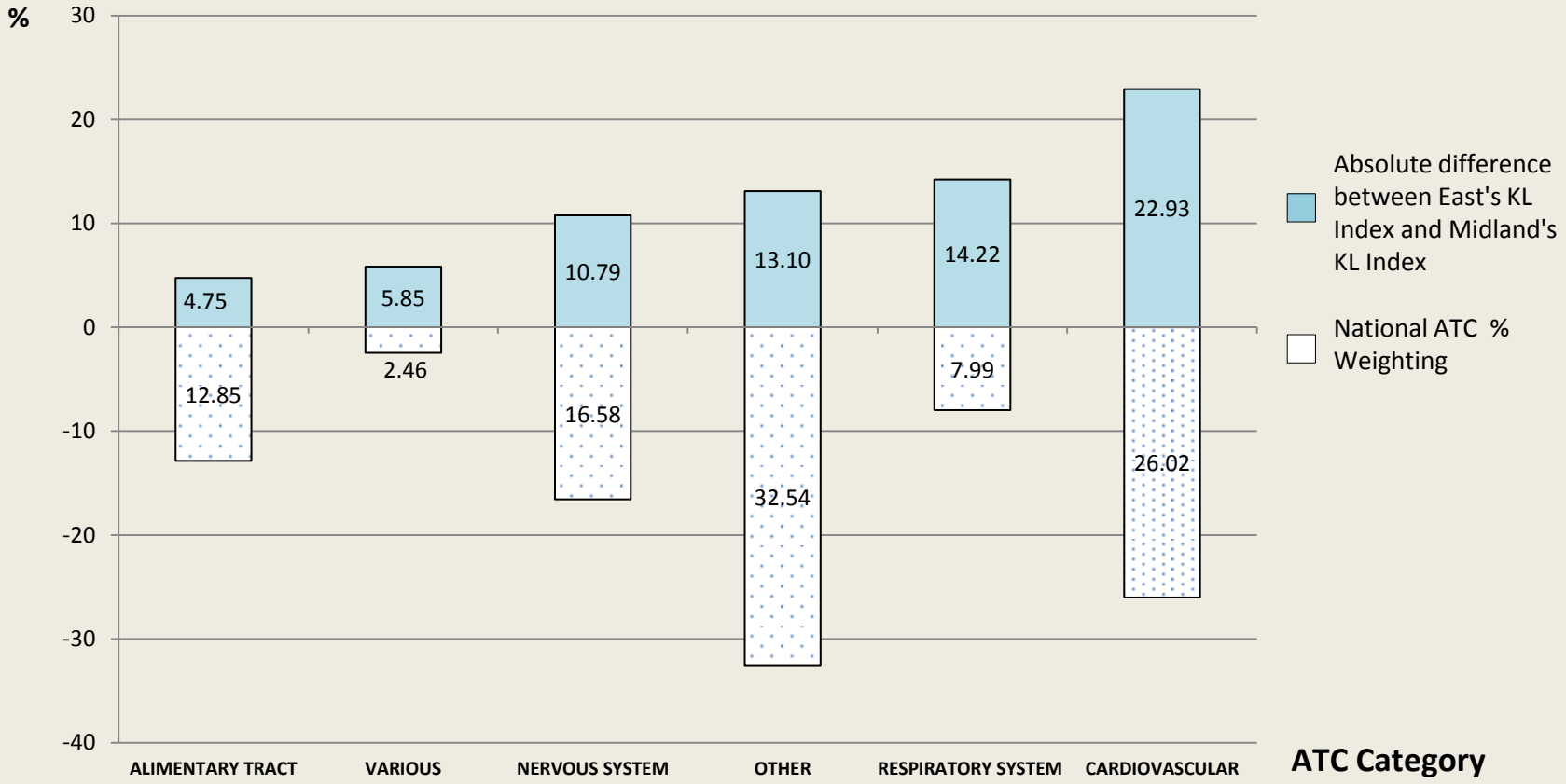
KL Composite Health Index



Largest Health Gaps by ATC Category



ATC Health Gaps (& Weights) between East & Midlands Regions



Income, Demographics, Coverage & Health Status

Region	CSO Disposable Income 2010	Percentage Aged over 65	% Covered by GMS	Composite Health Index
East	20,300	10.00%	28%	106.14
Republic of Ireland	**19,300**	**11.10%**	**35%**	**100.00**
South	19,200	12.00%	36%	100.48
Mid West	19,100	11.80%	38%	103.92
West	18,500	12.30%	41%	96.52
South East	18,100	12.00%	41%	97.05
North East	17,300	10.00%	38%	102.31
North West	17,300	13.00%	49%	94.04
Midlands	17,100	11.00%	38%	91.89

Correlates of Poor Regional Health

1) Low Income
2) Poor Demographics (i.e. a high % of population aged 65+)
3) Restricted access to Primary Medical services (GMS)
4) Location
5) Other factors

The 2010 data suggest that Good health;

1) Is income elastic (+1.26);
2) Responds positively but weakly to GMS cover (semi-elasticity = +0.0125)
3) Responds negatively to the elderly population share (semi-elasticity = -0.06)

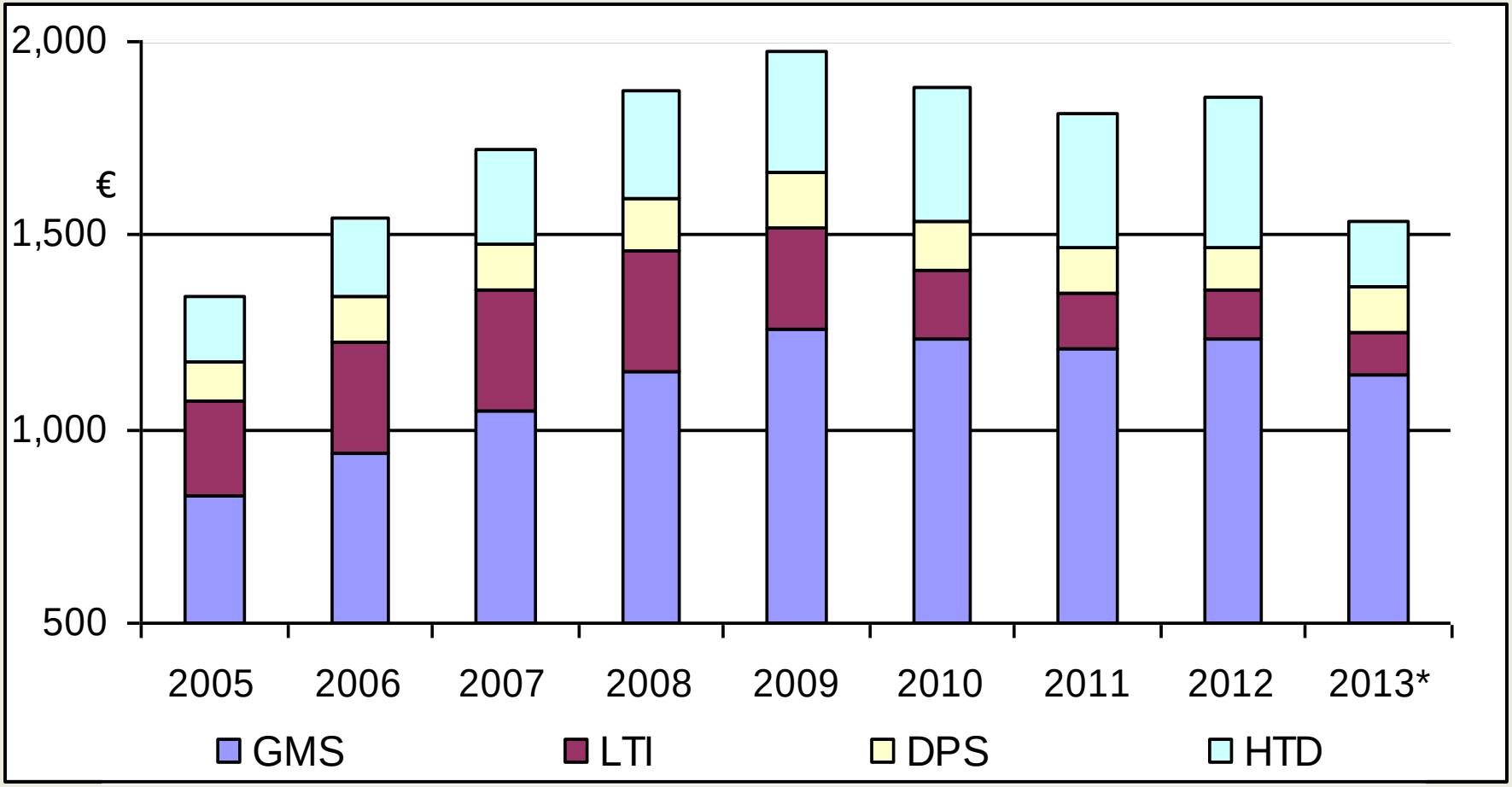
- Our analysis of regional health status is preliminary, macro and "broad-brush"

- See Kabir et al. 2013 for a detailed model-based micro-analyses of the success of specific **prevention** and **treatment** measures used to reduce CHD in Ireland from 1985 to 2006.

Consequences of Ill-Health

- We use regional health status, scheme coverage rates & prescribing norms to construct & validate a **simulation model**
- It simulates the number & type of drug prescriptions in each region in 2010 with high (97%) accuracy
- Prescribing (semi-elasticity) responds twice as much to a 1% gain in GMS coverage compared to a 1% gain in health-status
- Unit drug costs vary much more than prescribing rates across regions – we are investigating the reasons for this.

Cost of Public Scheme Drugs



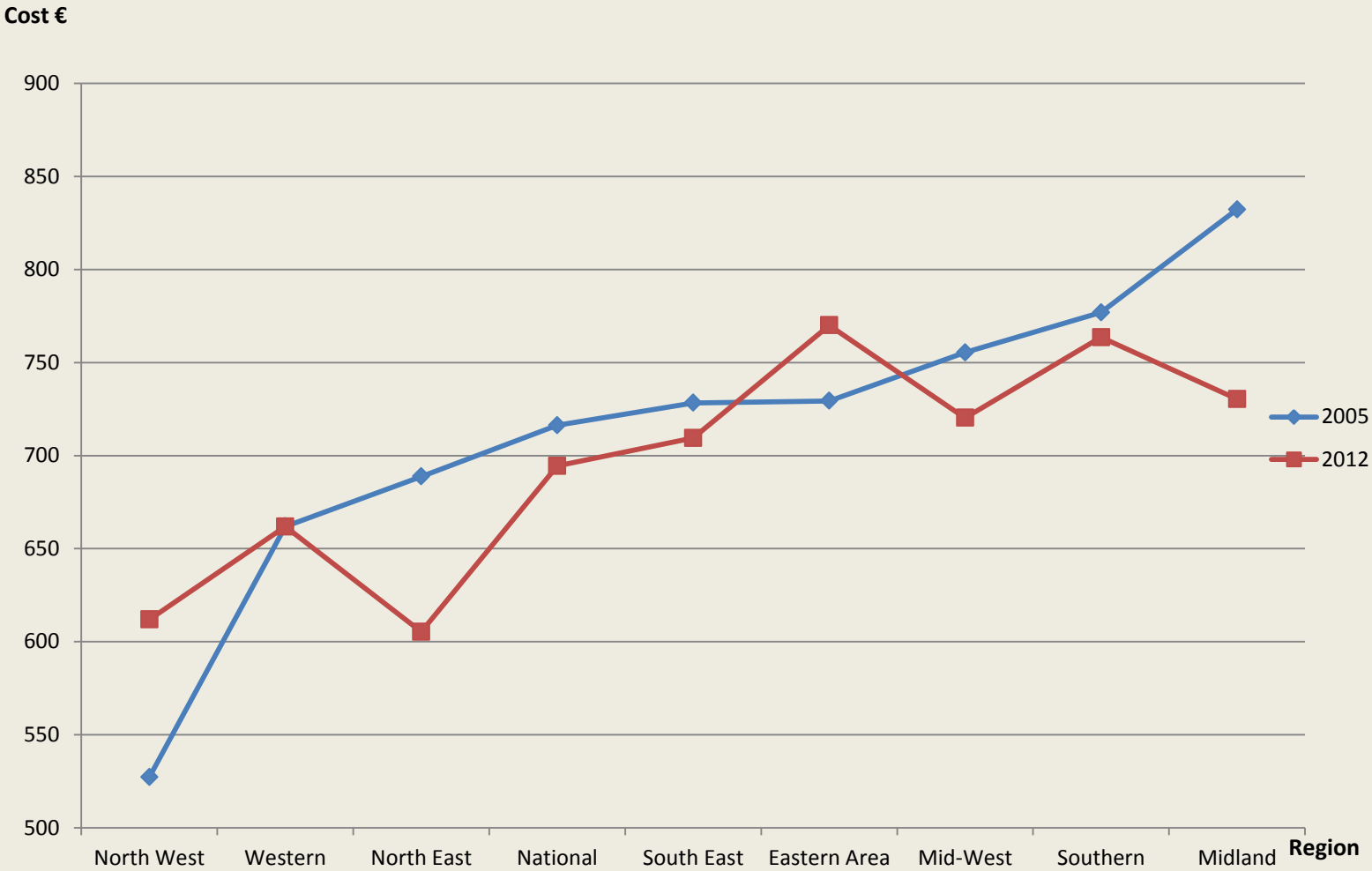
*as per V. Walshe, (2014)

Regional Costs

- **In 2005 –**
- Midlands had the highest GMS cost per person - €832
  North West had the lowest GMS cost per person - €527

- **In 2012 –**
- East GMS cost per person were the highest - €770
- North East GMS cost per person were the lowest - €605

2005 – 2012: GMS Average Cost of Medicines by Region



Focus on The Midlands

- **2005 –**

  Midlands had the highest GMS cost per person in 7 of 11 age cohorts

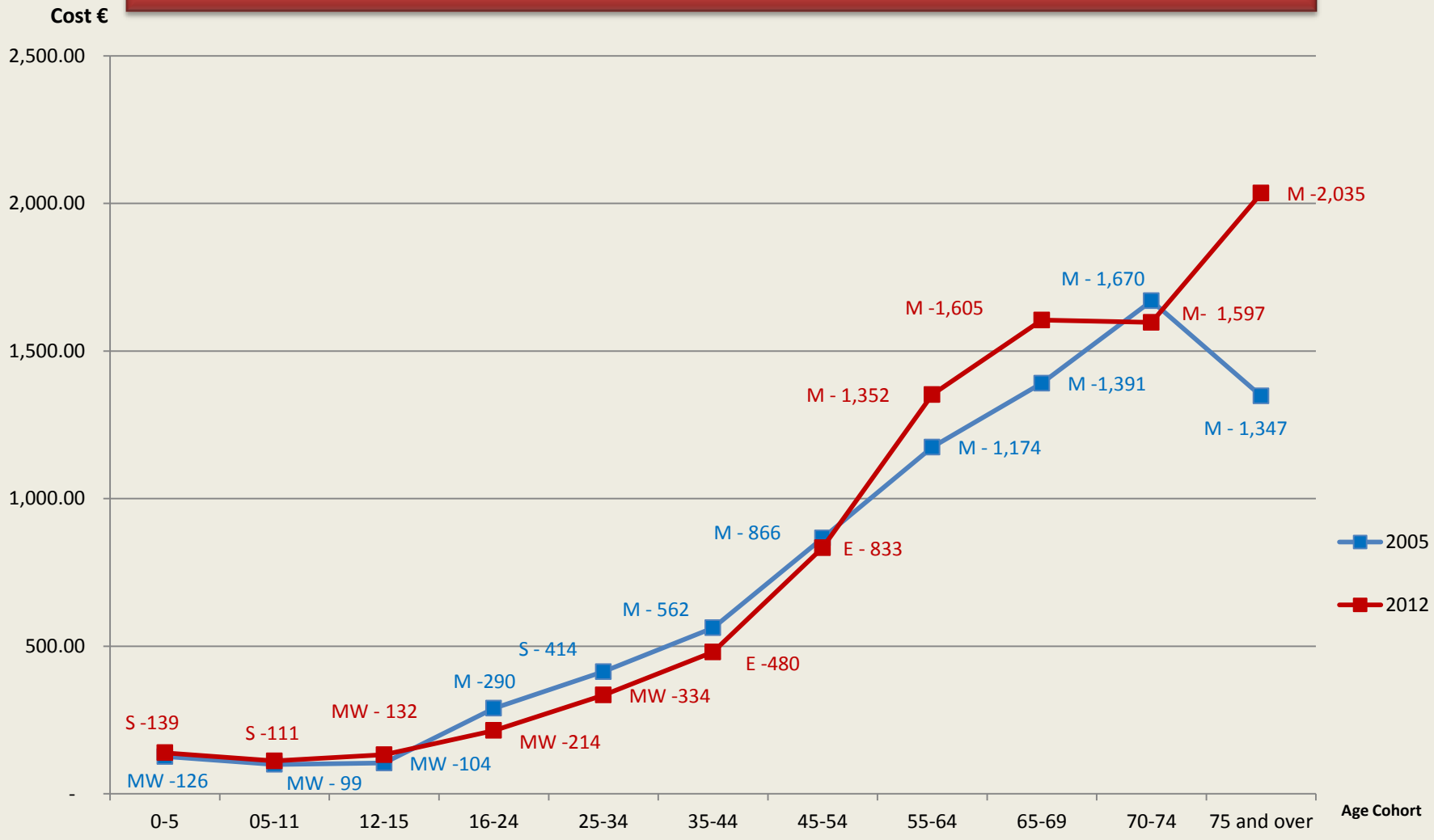
  - Including the 6 older cohorts aged 35 to >75s

- **2012 –**

  Midlands has highest GMS cost per person in 4 of the 11 age cohorts

  - Including the older age cohorts of 55 to >75s.

2005 - 2012: Maximum GMS Cost per Person in Each Age Cohort



Focus on Cardiac Health

- Cardiovascular disease is the dominant cause of death in Ireland (Kabir et al. 2013)
- In 2010 Cardiovascular items absorbed 24% & 23%, respectively, of GMS prescribing frequency & cost
- KL Health Index indicates the Midlands had the lowest index score (84.97) for Cardiovascular Health
- High cholesterol rates and high circulatory disease rates contributed to this

Improving Cardiovascular Health

- Health is unevenly distributed across Irish society
- ***Healthy Ireland*** **advocates Reducing Health Inequalities (Goal 2)**
- It also advocates "cost-effective prevention programmes" (Healthy Ireland, 2013)
- Issue of preventative vs treatment
- Ireland has benefited from reductions in smoking, cholesterol, blood pressure **BUT**
- Obesity, diabetes and inactivity rates have increased

Closing the Midlands Cardiac Health Gap Prescribing Cost Implications

- If the 15% Midlands-National Cardiovascular health gap was closed -
- It would reduce cardiac prescribing frequency in the Midlands
- If the Midlands rates fell to match the national cardiac prescribing rates
- The Midlands GMS, DP & LTI cardiac prescribing rates would each fall by about 13% - see below table

Cardiac Items Prescribed Per Person Covered in the Midlands		
Scheme	**2010 Midlands Cardiac Prescribing Rate***	**2010 National Cardiac Prescribing Rate**
GMS	**9.31**	**8.09**
DP	**1.23**	**1.07**
LTI	**7.39**	**6.42**

- Estimated

Change in Cardiac Prescribed Items in Midlands

	Before Gain in Cardiac Health	After Gain in Cardiac Health	Reduction in Prescribed Items
GMS Items	978,177	850,089	128,088
DP Items	198,803	172,847	25,956
LTI Items	59,526	51,720	7,807
Total Number of Items Prescribed	1,236,506	1,074,656	161,850

Prescription Cost Savings from Improving Cardiac Health in the Midlands in 2010

Prescription Costs	with Midlands Cardiac Health Status	If Midlands had National Cardiac Health Status	Cost Savings
GMS Cost	€15,896,812	€13,815,196	€2,081,616
DP Cost	€4,089,344	€3,555,443	€533,901
LTI Cost	€1,243,638	€1,080,538	€163,099
Total Cost	€21,229,795	€18,451,178	**€2,778,617**

- Cardiac Ingredient Costs per item: ***GMS - €16.25, DP - €20.57; LTI – €20.89***
- They imply annual savings of €2.8m with
- A Capitalised Value of around €70m (when discounted at 4%)

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Benefits and Costs of Improved Health

Benefits:

1. (Prescription cost savings)
2. Primary and Secondary Care costs
3. The Value of added life years
4. The Value of Reduced/Deferred Pain and Suffering Costs

Costs

1. Prevention costs (of, say, smoking cessation) are usually "lowest hanging fruit"
2. Treatments costs (e.g. statins or surgical interventions) are usually more costly

Cardiac Policy Implications

- Kabir et al., document a reduction of 70% in CHD in Ireland between 1985 and 2006 and
- Isolate the contributions of specific **prevention measures** and **treatments** to this reduction
- We believe the resulting health benefits greatly outweigh the costs and should inform and compel policy formation **but**
- The benefits and costs remain undocumented which frustrates warranted policy innovations

Conclusions and Recommendations

- KL Index calibrates health inequalities by region & health condition
- Benchmarks ***Healthy Ireland's*** goal of Reducing Health Inequalities
- Benchmarks scale of health gaps by **major health condition**
- Can be disaggregated to county level
- Can identify health advances/declines by region/condition – if constructed for a later year (and identify promising case studies)
- Provides a basis for exploring the macro-causes of health conditions
- Can combine with calibrated health models to identify the value of health benefits & prevention/treatment costs
- Provide a rational basis for health planning, replacing budget myopia.