Exploring Global Health Care Cost Drivers: France and United Kingdom

Sponsored by the International Actuarial Association Health Section (IAAHS) and the Academy's Health Practice International Committee (HPIC)

October 5, 2016

Presenters

- Adrian Baskir, FIA, FASSA, Vice Chair, IAA Health Section, Member, IAA Health Committee (UK)
- Christelle Dieudonné, IAF, Chairperson, Health Committee of the French Institut of Actuaries, member, IAA Health Committee and Section, member, IAA OECD sub-committee (France)
- Yann Quere, IAF, Member, Jury of the Institut des Actuaries, member, Health Committee of the French Institut of Actuaries (France)
- **Moderator**: April Choi, MAAA, FSA, Chairperson, IAA Health Section (United States)

Exploring Global Health Care Cost Drivers

2015-16 Webinars Highlighted Various Health Care Systems

Professor Tuvia Horev (Israel)

Rian de Jonge (The Netherlands)

Emile Stipp (South Africa)

Tom Wildsmith (U.S.)

Alvin Fung (Singapore)

Candice Ming (Australia)

Stuart Rodger (Australia)

John Have (Canada)

Jonathan Callund (Chile)

Alex Leung (Taiwan)

Lawrence Tsui (Hong Kong)

April Choi (IAAHS moderator)

Susan Mateja (Academy's HPIC moderator)

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Exploring Global Health Care Cost Drivers: France and UK

We continue this series in 2016:

- August 25 (Taiwan & Hong Kong)
- **October 5 (U.K. & France)**

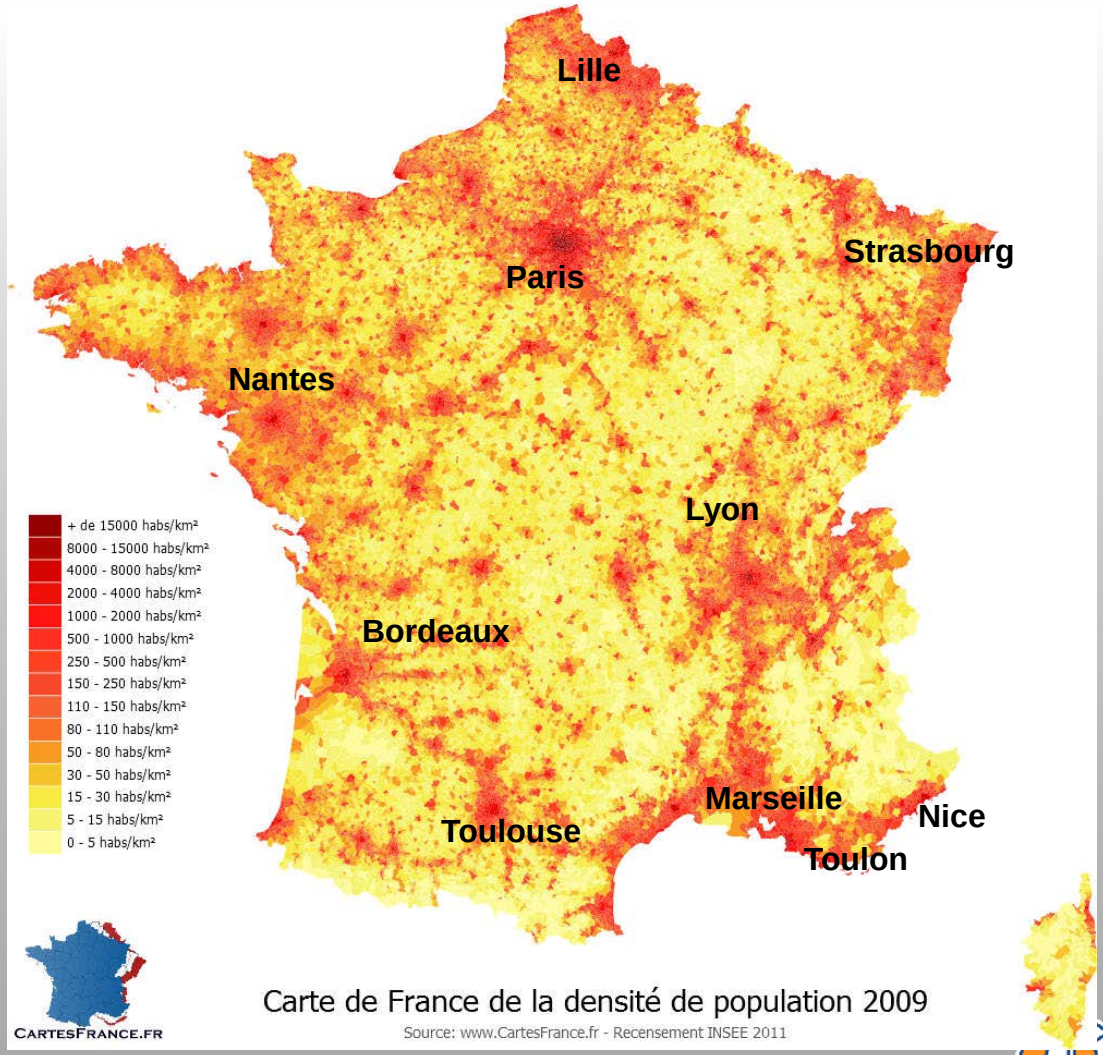
We are holding a conversation that will explore the following:

- General characteristics
- Financing system
- Cost drivers
- Methods of coping with the cost drivers
- Measurement metrics
- Insights, successes, hurdles
- Future trends

Exploring Global Health Care Cost Drivers: France

Christelle Dieudonné & Yann Quéré

France



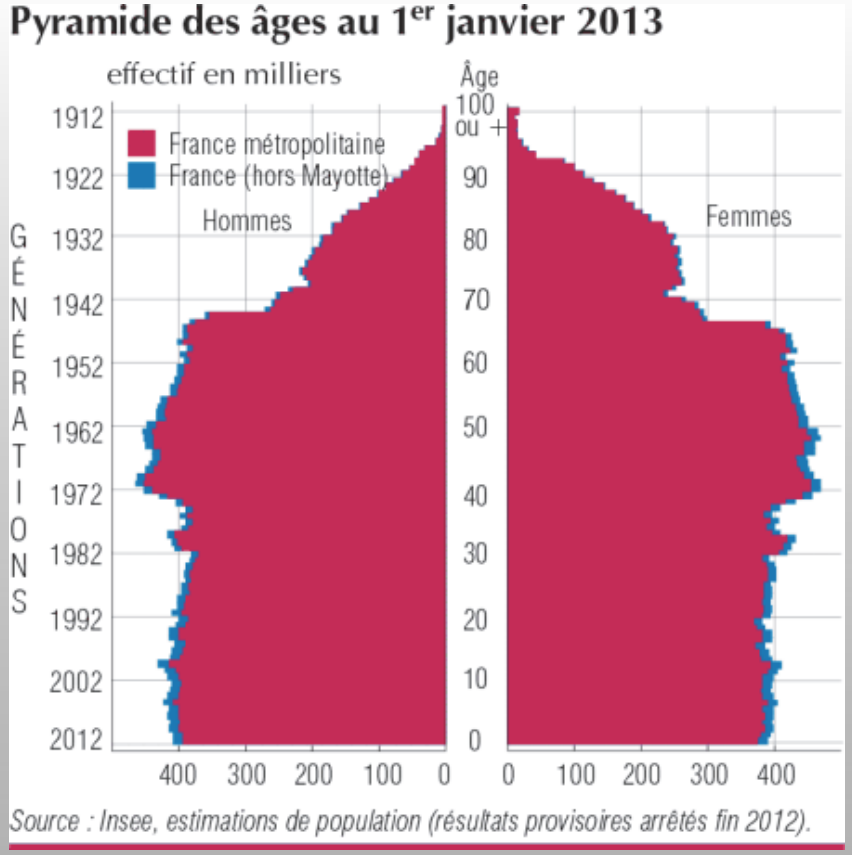
Carte de France de la densité de population 2009

Source: www.CartesFrance.fr - Recensement INSEE 2011

France

- 555 000 km2
- 65 millions pop'n
- Density : 118 hab/km2
- 80% live in urban areas
- 19% live in or near Paris
- 10% in or near
  - Lille
  - Lyon
  - Marseille

French Metropolitan Population



- 65 millions of people**
  - < 20: 24,7%
  - 20-59: 51,5%
  - > 60: 23,8% (an increase of 23,4% over 10 years)
  - > 65: 17,5 % (50% are more than 70)
  - Average age: 40,6 as of 1/01/2013,
- GDP per pers: 35 395*
- Projection**:
  - Estimated to be 43 in 2035 and 45 in 2060
  - 73,6 millions of people in 2060 with 33% more than 60

* OECD numbers 2015
** INSEE

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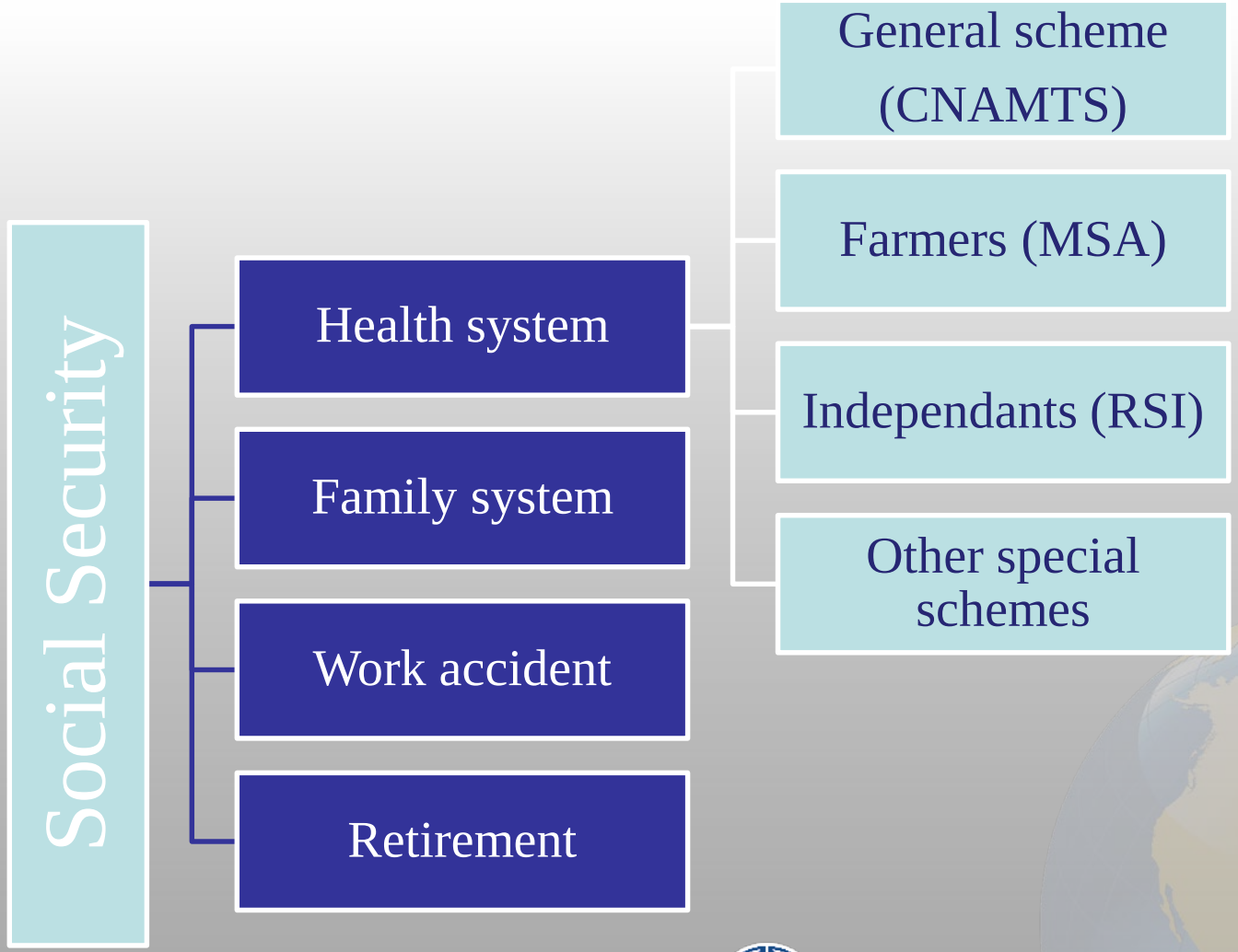
Overview of France's Health Care System

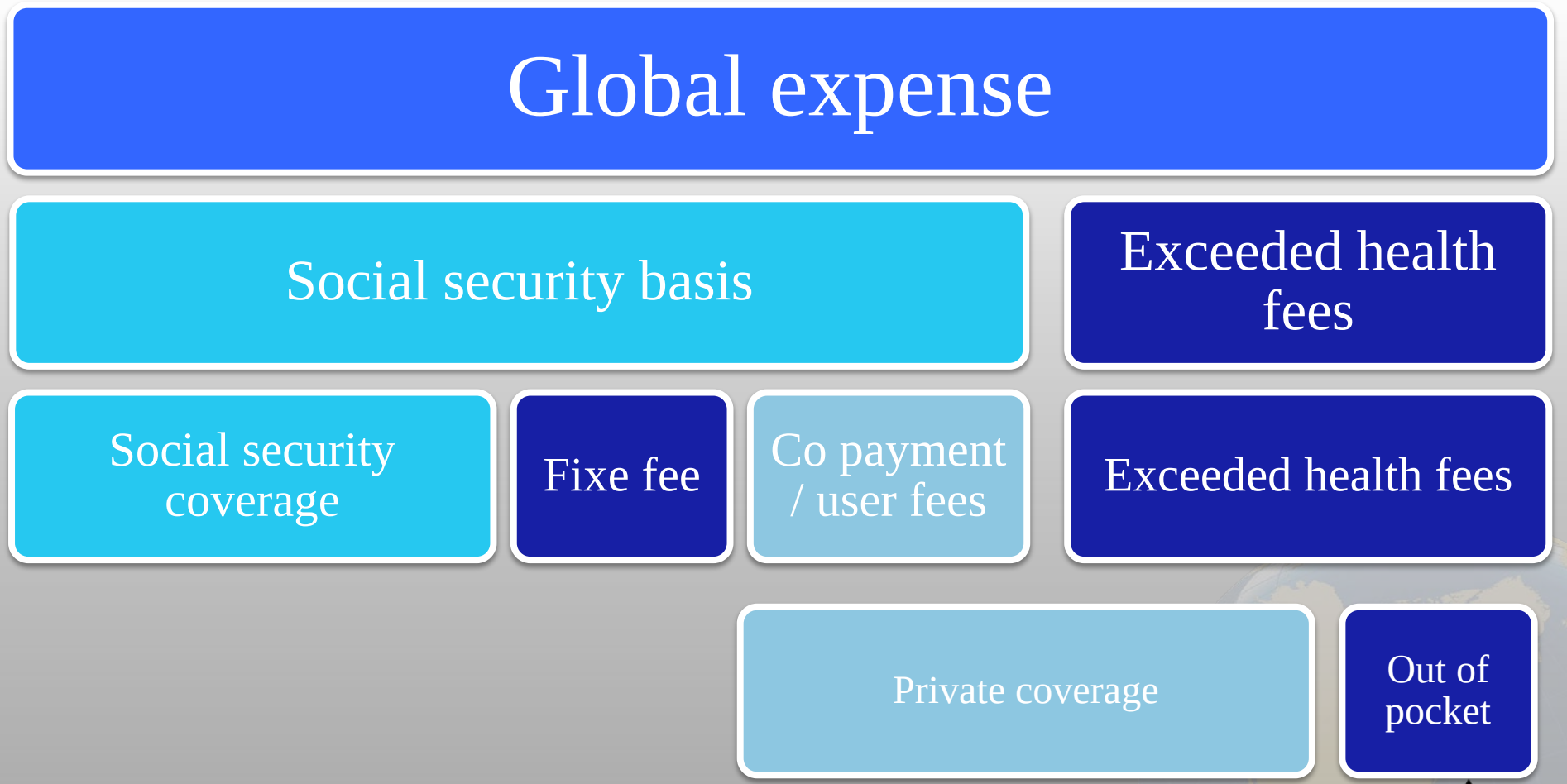
French Social Security System

- The French Social Security System is historically managed by different Administrations:
  - General scheme for private employees (80% of the population)
  - Farmers scheme
  - Independent workers scheme
  - Different public or para-public special scheme
- Their objective is to implement/manage operationally the 4 branches (health system, family, work accident, and retirement).
- Regarding health, the public health coverage is mandatory. The level of the coverage is the same for all of these administrations. Which is not the case for retirement regarding the level of pensions.

French Social Security System



French Health Care System



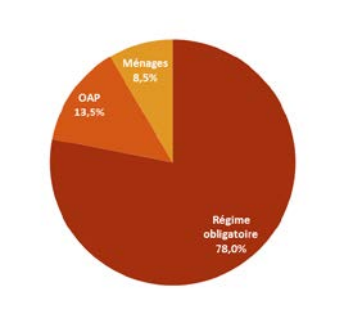
French Health Care System

Pillar 3
Out of pocket for individual
8,7% Health claims

Individual additional coverage

Collective additional coverage (optional)

Pillar 2 : Private Sector
(13,6% Health claims[1])



Collective agreement that defined collective health coverage for employees

Pillar 1 :
Health Social Security coverage
(77,7% Health claims [1])

[1] données 2014 – source FFSA, montant total des dépenses de santé : 191,8Md€
[2] Janvier 2016 : toutes les entreprises proposent un régime collectif de santé

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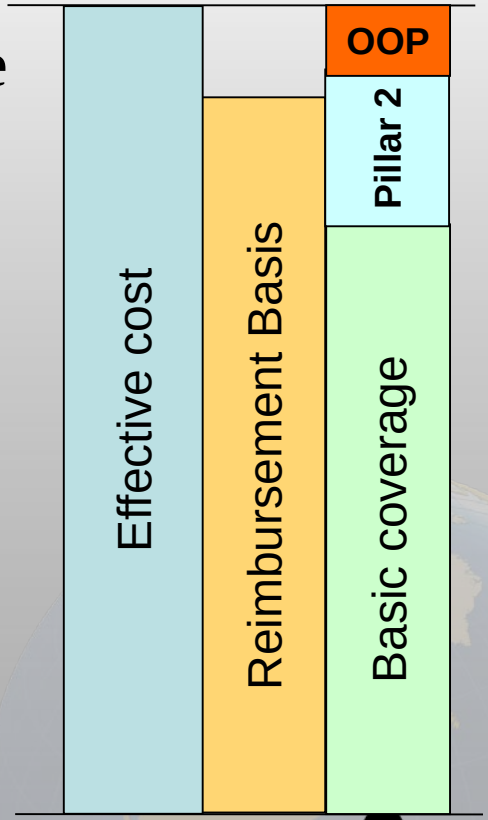
Pillar 1 : Public Health Care System

- Public Health Care System is defined by a minimum health coverage (1st pillar) which is mandatory
- Financed by social contributions paid by employers and employees (retirees and the unemployed do not contribute) and taxes
- Public health care claims expenditure in 2014 was 149 billion euros, 77,7% of the total claims expenditure (with a deficit of 6,5 billion euros)
- Since January 1, 2016, all workers or regular residents in France are eligible to the public health coverage, without any contribution from eligible citizens in some cases
  - PUMA = Universal Healthcare Protection

Pillar 1 : Public Health Care System

- Government sets prices for medical visits and drugs
  - These prices represent the reimbursement basis
- Government defines a specific reimbursement rate for medical visits and type of drugs (normally based on risk)
  - Basic coverage includes: physicians, hospitals, drugs, dental, optical expenses
  - Reimbursement rate is mostly 70% of these bases
  - Reimbursement rates or basis are very low or even zero for some health expenses (optical, audioprothetics, …)



Pillar 2 : Private Health Care

- There are 3 major types of organizations that provide private coverage, they differ mainly by their governance:
  - Mutual insurance Cies (ruled by participants)
  - Classical private insurance Cies (private insurance companies)
  - Joint Institutions (co-ruled by workers and employers unions)
- Private complementary coverage is mandatory for private employers since 2016 based on a minimum set of expenses coverage
- “ACS” = public funding provided for low wages employees granting them access to complementary coverage

Pillar 2 : Private Health Care

- Private insurance coverage: 13,6% of total claims expenditure
  - About 30% gap not covered by public system = “Ticket Moderateur (Co payment / User fee)” for current expenses
  - Some Drugs not covered by public system
  - Dental (~ 20% private health care expenses)
  - Paramedical
  - Optical expenses
  - Medical supplies – outside hospitals
  - Medical and chirurgical extra fees

Pillar 3: Out of Pocket

- Out of pocket: 8,7% of total claims expenditure
  - Non core medical services
  - Dental
  - Optical expenses
  - Medical and surgical extra fees
- Historically, French people are used to a high level of mandatory coverage and are not used to directly financing their medical expenses
- One risk of recent evolutions of the health system is an increase of the « OOP » part

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Cost of French Health Care System

Health Care System - Expenses

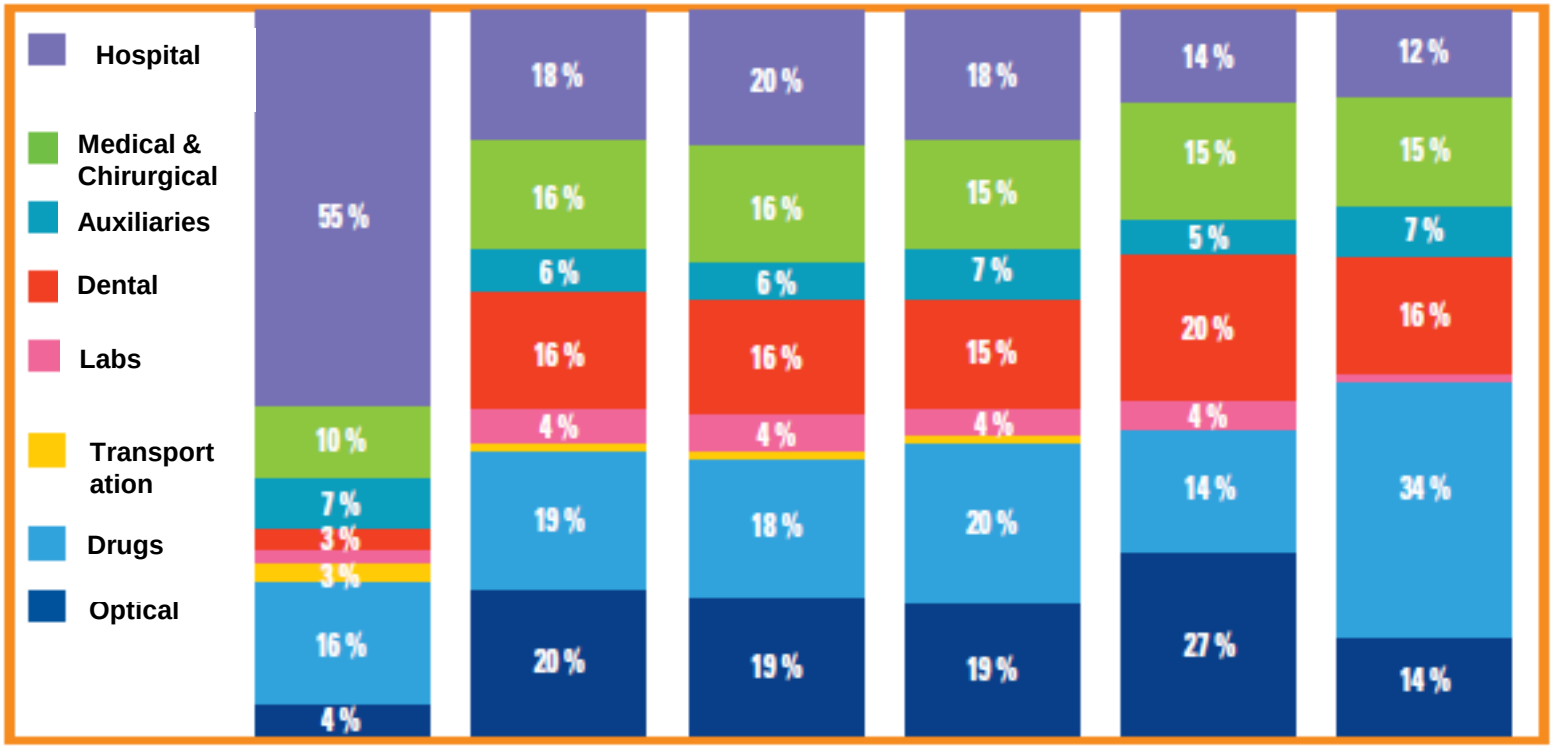
(en milliards d'euros)	2010	2011	2012	2013	2014	Répartition 2014
Social Security	134,6	137,8	141,0	144,6	149,0	77,7 %
Private system	23,6	24,6	25,2	25,7	26,0	13,6 %
Private Companies	6,3	6,7	7,0	7,3	7,4	3,9 %
Mutual Companies	13,1	13,3	13,6	13,6	13,8	7,2 %
Institutions	4,2	4,5	4,6	4,8	4,8	2,5 %
OOP	16,0	16,5	16,5	16,5	16,8	8,7 %
Total	174,1	178,9	182,7	186,8	191,8	100,0 %

(1) relevant du Code de la mutualité

Sources : Comptes nationaux de la santé et estimations AFA

Health Care System - Expenses

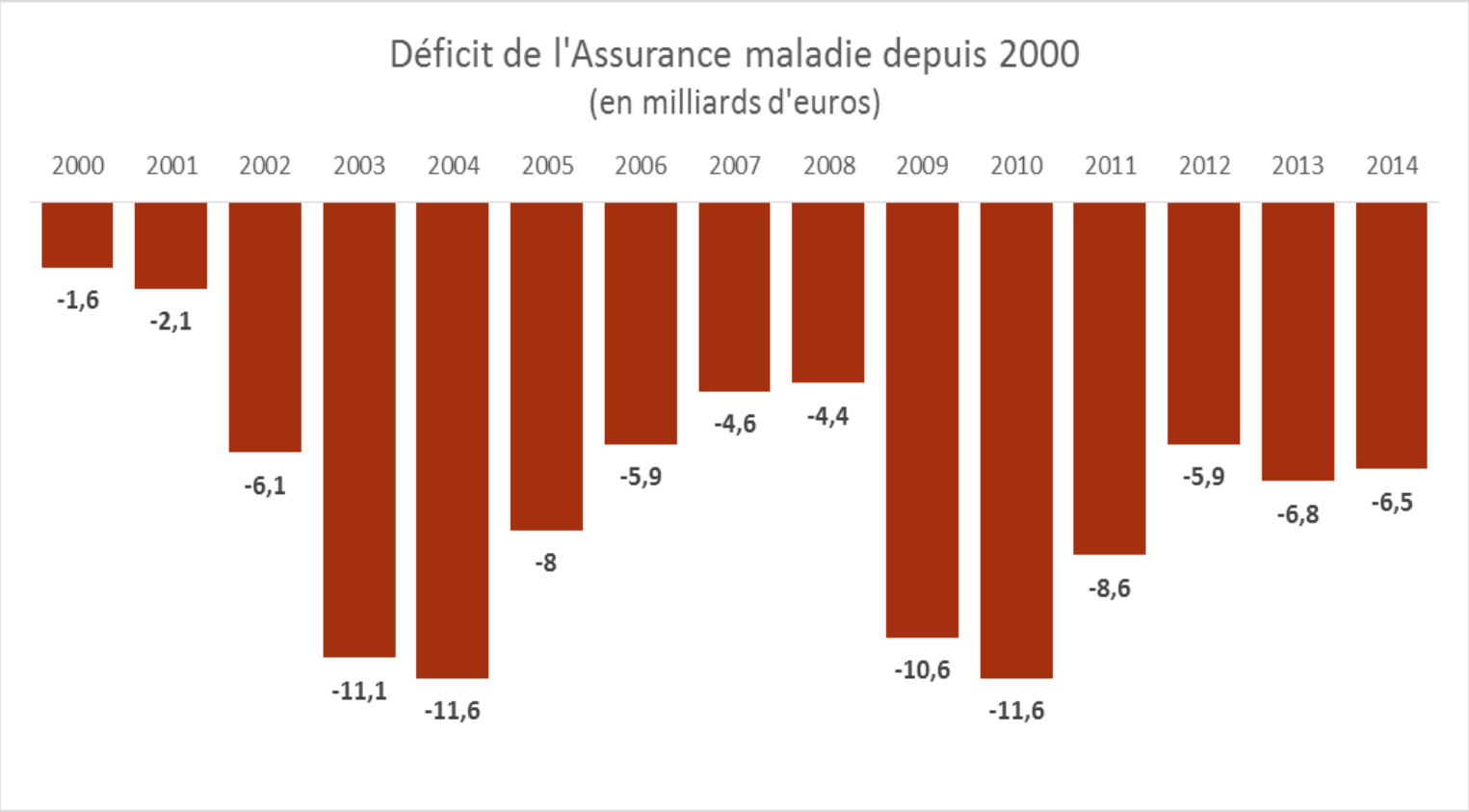
Year 2013 Expenses



(1) données 2014 non disponibles (2) relevant du Code de la mutualité Source : Comptes nationaux de la santé

Health Care System

Structural Deficit of Pillar 1 Since 2000



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French Health Care System Issues Ahead and Trends

Issues Ahead

- Growing part of the out of pocket due to coverage capping with new “responsible contract” law
- Transfer of coverage from Social Security toward private insurance (→ non mandatory individual schemes)
- Social Security willing to reduce minimum coverage for some types of medical acts and drugs

Consequences:

- Antiselection phenomenon for private optional coverage
- Increase of insurance prices or possible lack of coverage?
- …a possible forego /give up of treatment?

Issues Ahead

- **Long term diseases/ chronic illnesses**: fully covered by Health Social Security System (level of coverage 100%)
  - Decrease this level of coverage by x%
  - Transfer to private insurance
- **Increase of Physicians' fees**
  - New contracting conditions between Social Security and independent physicians
  - Example: general practitioner visit 23 € → 25 € (validated as of today)
- **Better education facing healthcare**

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French Health Care System
Role of Actuaries

Challenges for French Health Care Actuaries

NB : In France, there are no appointed actuaries

- Becoming an efficient advisory for public health care management: bringing our technical knowledge to help the public system being more efficient and reduce structural deficit
- Challenging the paradox: Aging population and health care costs
- Underwriting challenge facing the increase of optional coverage:
  - Better evaluation of health risk
  - Better forecasting of prevention effects
- Processing health data
- In France, health care insurance is non-life risk and still considered short-term risk…

Thank You

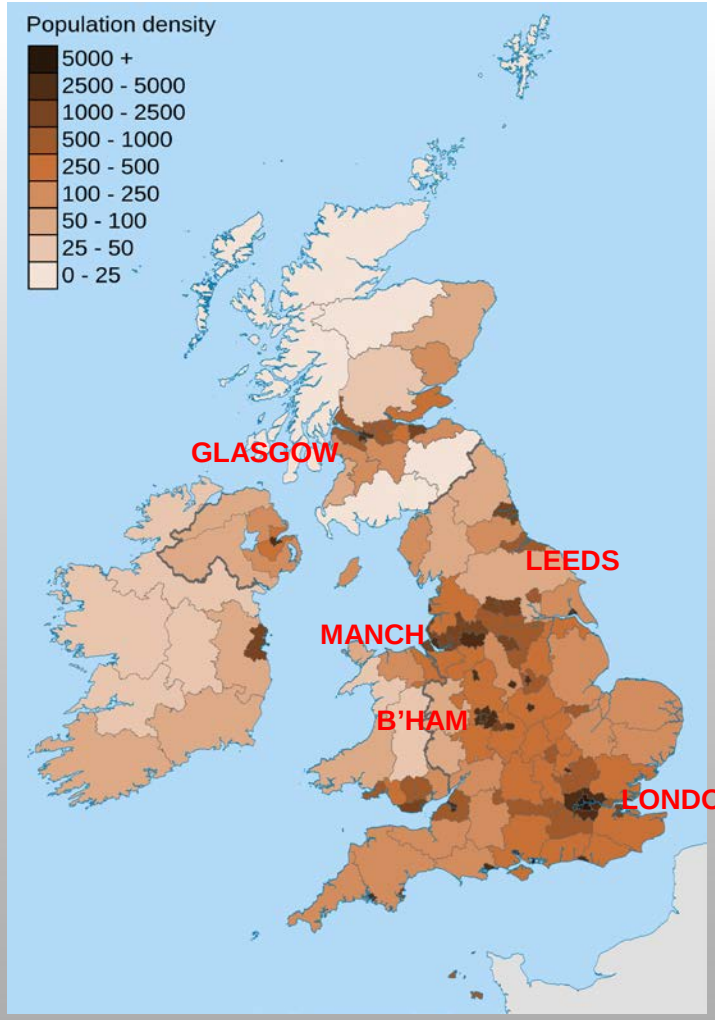
Exploring Global Health Care Cost Drivers: United Kingdom

Adrian Baskir

Agenda

- UK Overview
- National Health System
- Private Insurance
- Long-Term Care
- Issues Ahead
- Role of Actuaries

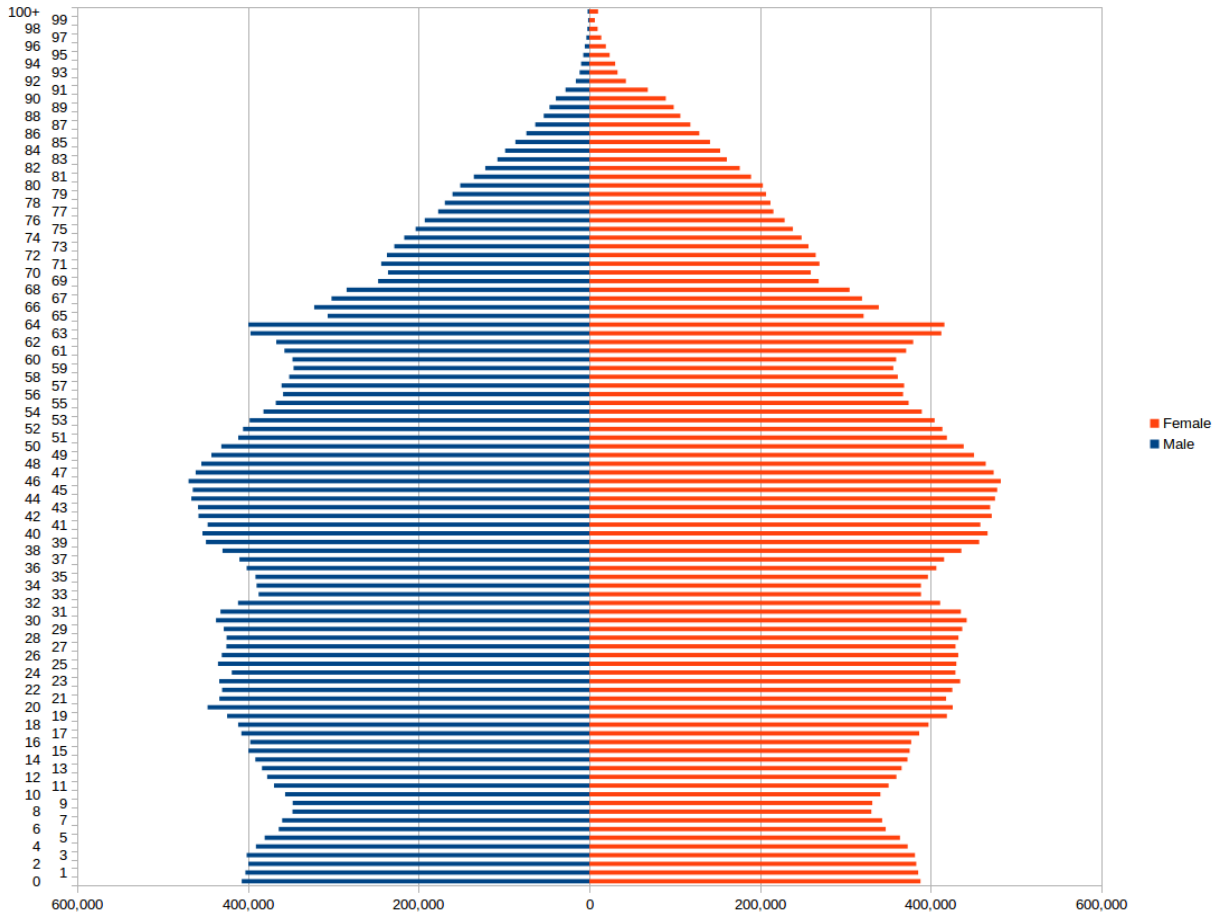
United Kingdom



Sources: Ordnance Survey; Office of National Statistics, 2011 Census;Demographia - "World Urban Areas Report"

- Great Britain
  - 4 countries (Eng, Scot, Wales, N Ireland)
  - 5th largest economy in world
  - 65.1 million population
  - 53 million in England (amongst most densely populated in world)
- Per World Urban Areas Report:
  - 10.2m live in Greater London
  - 2.6m live in Greater Manchester
  - 2.5m live in Birmingham & West Midlands
  - 1.9m live in Leeds
  - 1.2m live in Glasgow

UK Population



- Typical developed country profile
- Aging population...
- Baby Boomers reaching retirement
- Generational "shortages" ages 5-15 and 30-40 evident

Source: Office of National Statistics, Census 2011

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Overview of UK's Health Care System

National Health Service (NHS)

NHS Overview

- Launched in 1948
- Ideal: *'Good healthcare should be available to all, regardless of wealth.'*
- Free at point of service (other than prescriptions, optical, & dental services)
- Devolved responsibility in each of England, Scotland, Wales & Northern Ireland
- Employment: 1.5mil people (in Top 5 of world workforces)
- England: 150k doctors; 41k GPs, 315k nurses, 19k ambulance staff, 111k hospital & community health service medical & dental staff
- Scotland (161k), Wales (84k), Northern Ireland (66k)
- Largest = NHS England: covers 1 mil patients every 36 hours

Source: www.NHS.uk/NHSEngland/about/Pages/overview

Jeremy Corbyn pledges to 'renationalise' NHS and scrap PFI deals

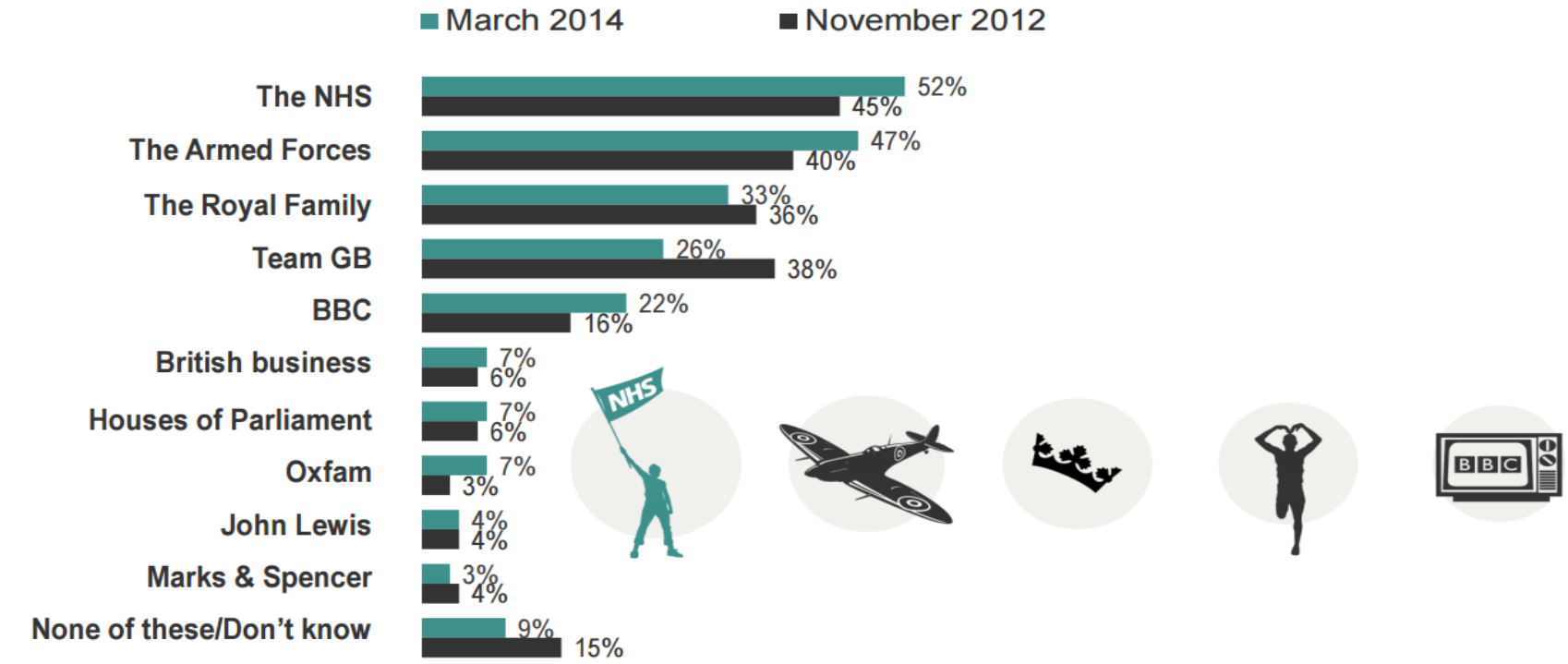
Written by: John Ashmore
Posted On: 24th August 2016

Jeremy Corbyn will today pledge to "renationalise" the NHS by working to remove all private sector involvement in the health service.

NHS Perceptions

…the NHS remains the thing that makes people most proud to be British

Which two or three of the following, if any, would you say makes you most proud to be British?



Base: Adults aged 15+ in England: (978) March 2014; (2515) November 2012

Source: Ipsos MORI

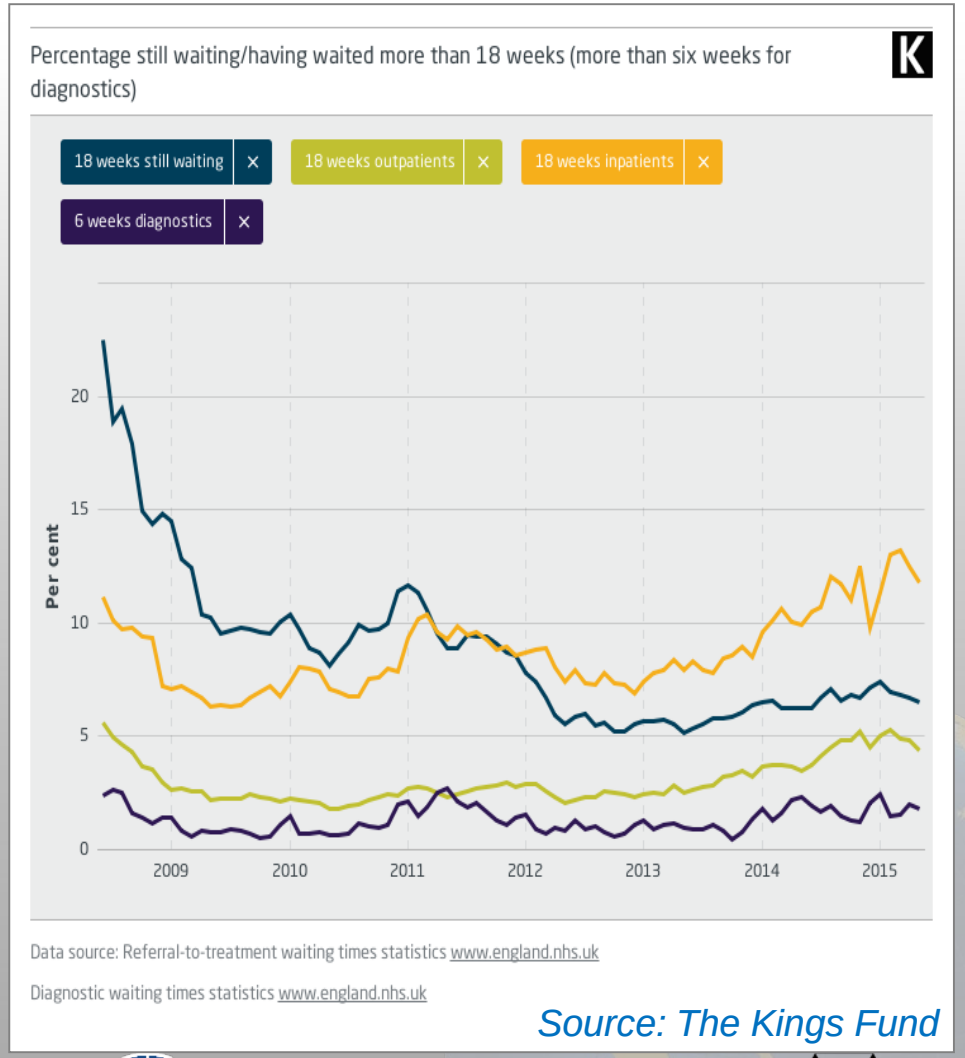
Ipsos MORI
Social Research Institute

NHS Services

- Telephone advisory services (NHS Direct)
- Best practice and cost effectiveness (NICE guidelines in England & Wales; Scottish Medicines Consortium)
- Parking charges controversy in England
- Prescribed drugs (£8.20 per item in England although certain categories exempt; free in Scotland, Wales & Northern Ireland)
- Outsourcing of certain services to private sector, particularly under Labour Blair government (current Labour Opposition Corbyn's view is to reverse this)
- Private hospitals tend to cover routine care; A&E largely NHS
- Devolution agenda to explore local solutions – Manchester seen as best placed local council

NHS Performance & Issues

- 2014 *Commonwealth Fund* Report ranked NHS #1 for Quality of Care, Access to Care, Efficiency; and #2 for Equity but #10 Healthy Lives
- *The Economist Intelligence Unit* rated palliative care best in world
- Areas of Criticism: Cancer survival rates, access, short staffing and equipping at hospitals, 'autocratic top down mgt culture,' prevention.
- Junior doctor strikes 2016
- Waiting times increasing ...
- Deficit growing and will continue to grow as population ages..

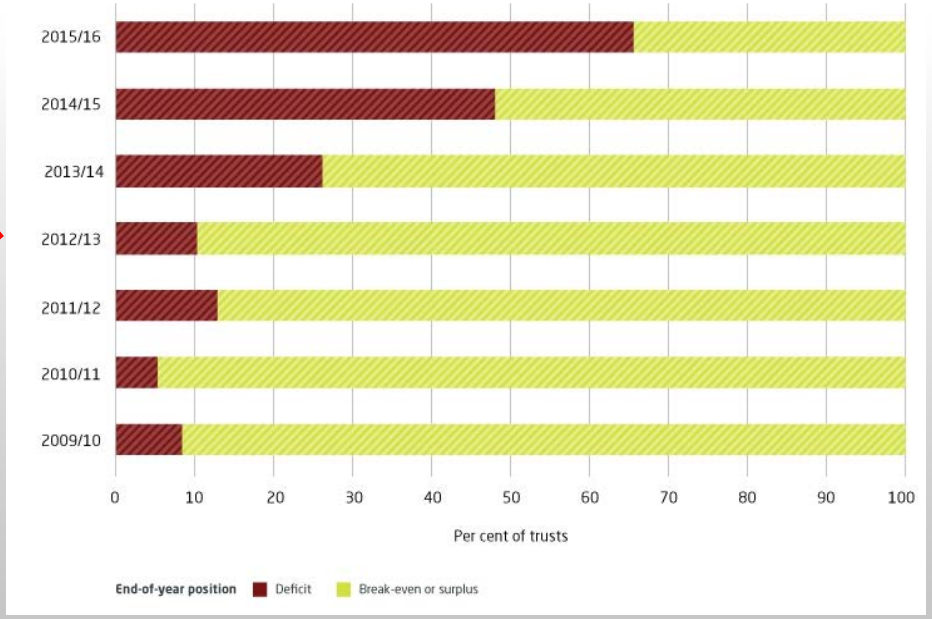


Source: The Kings Fund

Sources: Commonwealth Fund – "How the US Healthcare System Compares Internationally"; The Economist Intelligence Unit- "Ranking Quality of Death Index 2015"

NHS Finance and Budget

- Funded directly from taxation
- Transformation in 2013 with focus on reducing deficit and restructuring of commissioning (CCGs) in England.
- In 1948, budget was £437m (about £15bn in today's money).
- 2015/6 budget was 116.4bn (NHS England 101.3bn).
- Very low % increase growth in spend vs other OECD countries.
- To achieve comparable standards would require an investment of £10-£20bn pa.



Source: The Kings Fund, "Deficits in the NHS 2016"

- Twin priorities of sustainability & transformation (£300m allocated).
- Funding crunch predicted in 2018/19: £22bn savings demanded from NHS by Govt.

Source: www.NHS.uk/NHSEngland/about/Pages/overview

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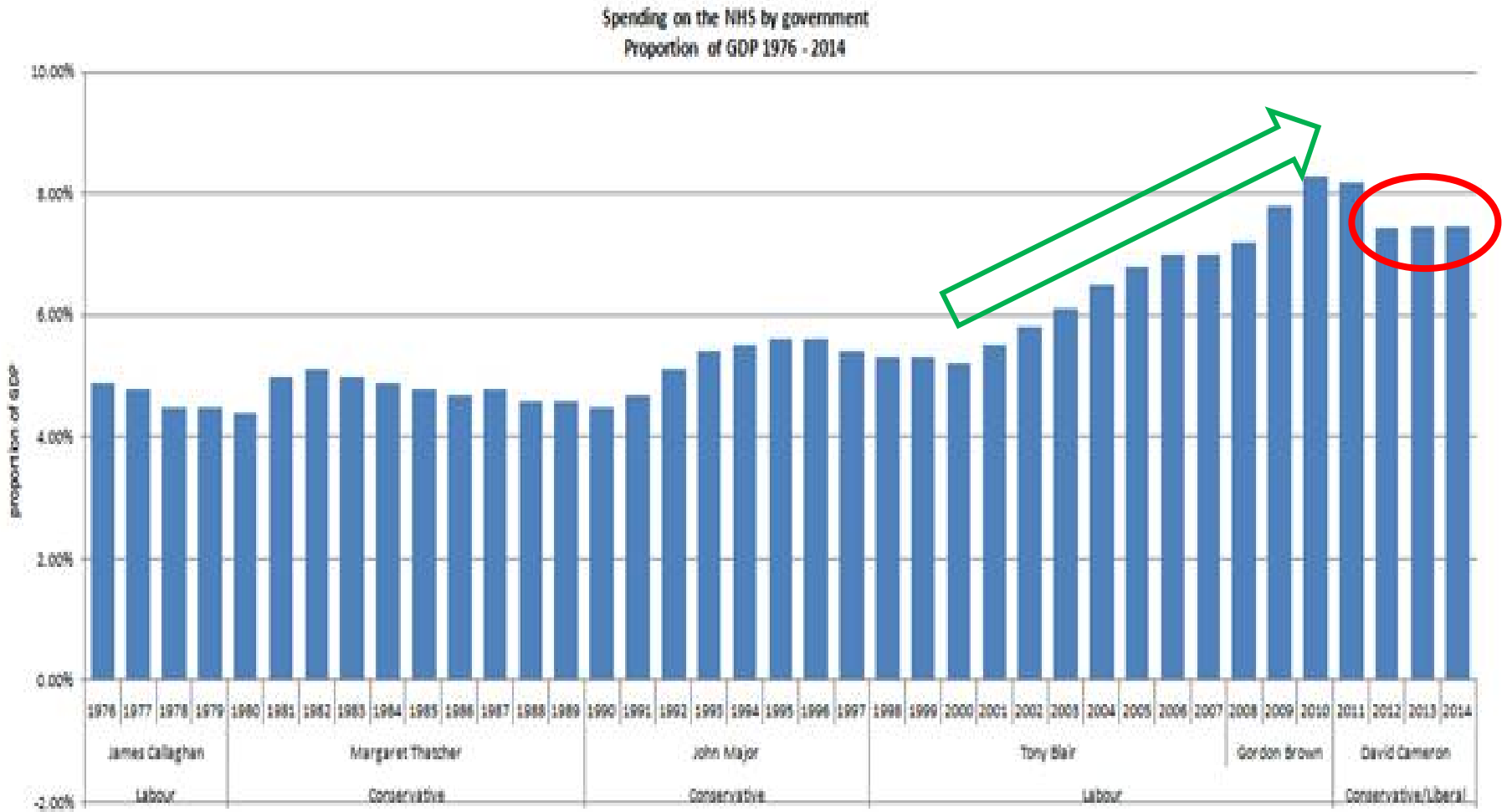
NHS Expenditure
Political Regimes Influence Funding



Source: Office of National Statistics (ONS) for expenditure and GDP data; Bupa Analysis

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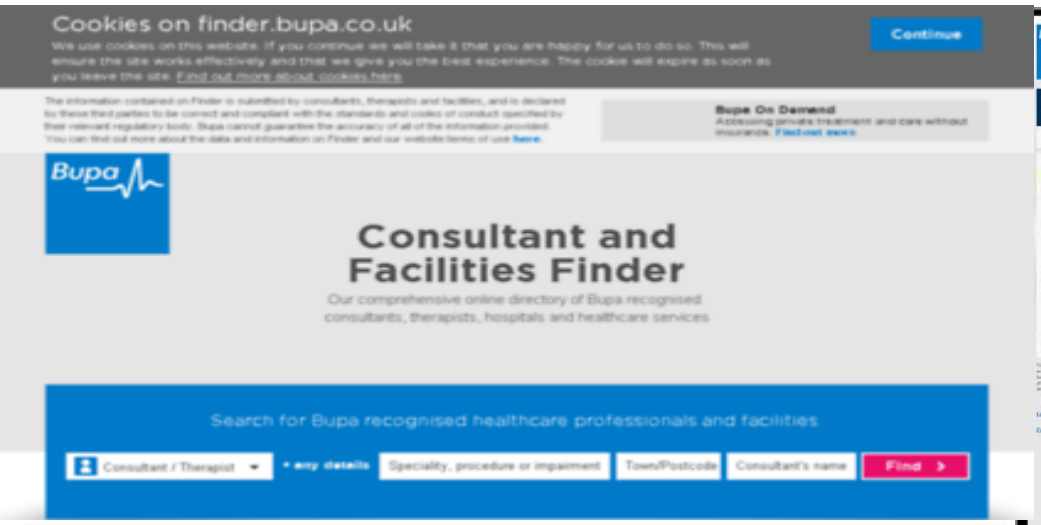
Overview of UK's Health Care System

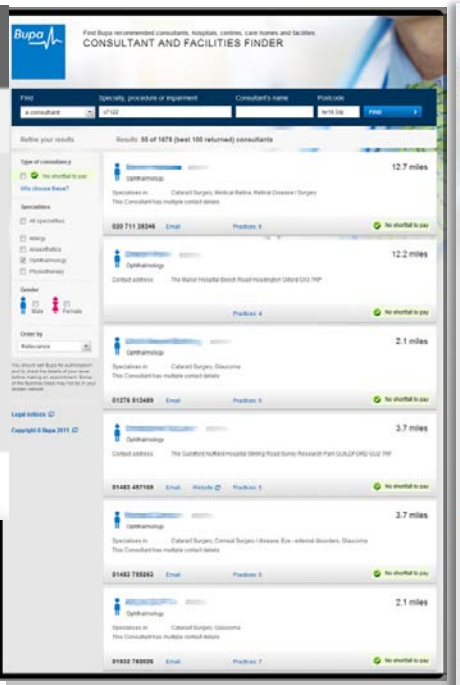
Private Insurance

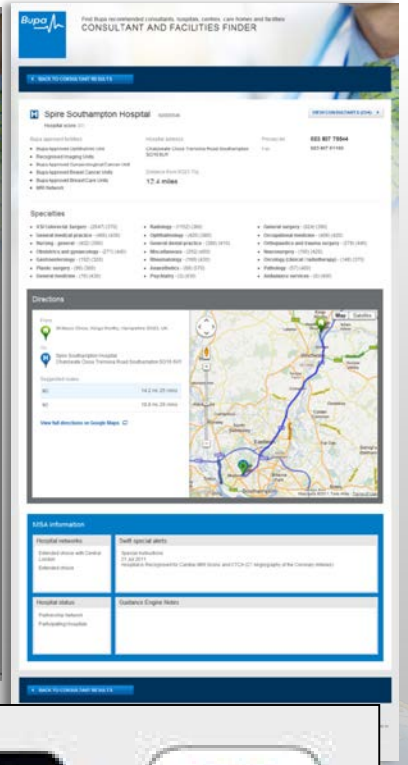
Private Insurance Coverage

- Private Medical Insurance (PMI) & Health Trusts
  - Covers non-emergency secondary and tertiary care
  - Provided post the GP referral (i.e., from consultant specialist)
    - But recently have started to include virtual GP offerings
    - Since 2012, some directed care (open referral service offerings)
  - In private hospital setting
    - Some offer NHS cash incentives
  - Excludes prescription drugs other than cancer-related (chemo.)
  - **Shorter waiting times**
- Health trusts (similar to USA-style ASO's)
- Dental plans; optical plans; cash plans for everyday health needs

PMI Directed Care and Influencing

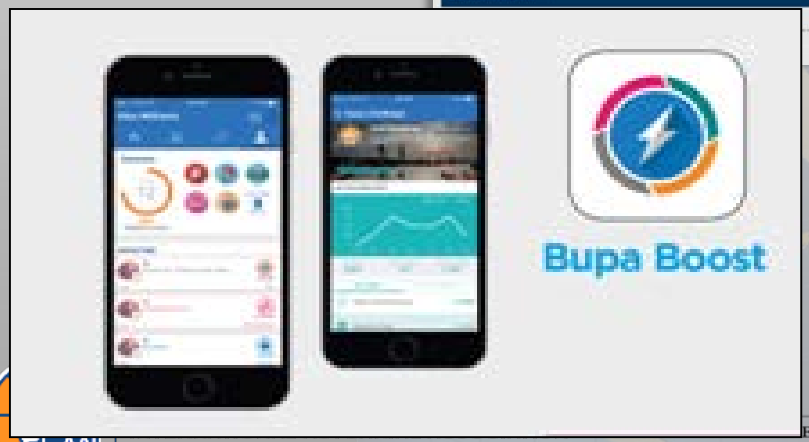






Informed choice through open referral

Bupa Open Referral helps members to see the right consultant with the right specialism.

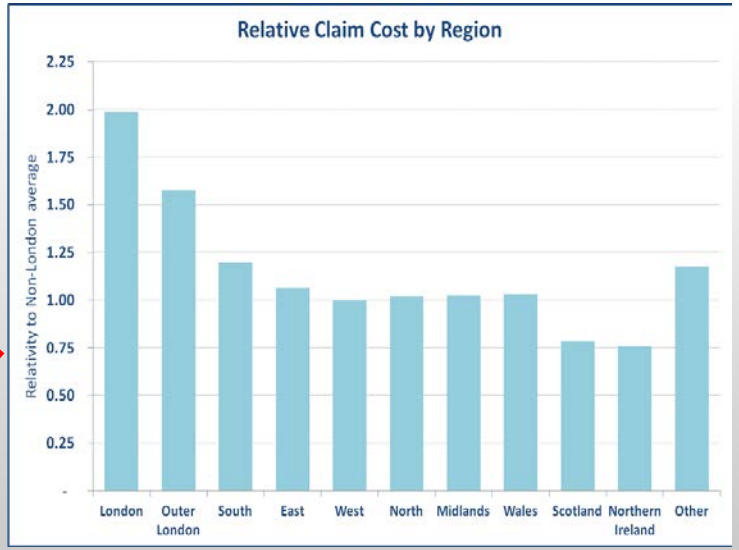


PMI Benefit Design

- Comprehensive care
  - Covers all in hospital treatment
  - Out-of-hospital coverage full refund or subject to outpatient annual £ limit
  - Covers patient journey from Consultant onwards but starting to include virtual GP offerings
  - Financial incentives to reduce costs or influence behaviour
    - Use of £ Excess
    - Co-payments and sub-limits not a common feature
    - Mental health limits
    - Restrict number of visits (e.g., physio)
- Some plans cover only parts of the patient journey eg Treatment and Care (post diagnosis) or Following and Related (post hospitalisation)

PMI Pricing Considerations

- Risk rating for individuals
  - Age rating:
    - Equality Act 2010 prohibits discrimination but insurer can use age rating if supported by assessment of risk
  - Postcode rating (as indicator of):
    - Ability to rapidly access private care
    - Cost of providing that treatment and care
    - London>> Rest of UK ...
  - EU Gender directive (since Dec 2012)
- Experience rating for company-paid arrangements
- Insurance Premium Tax increasing
- FCA requires compliance with Treating Customers Fairly principles



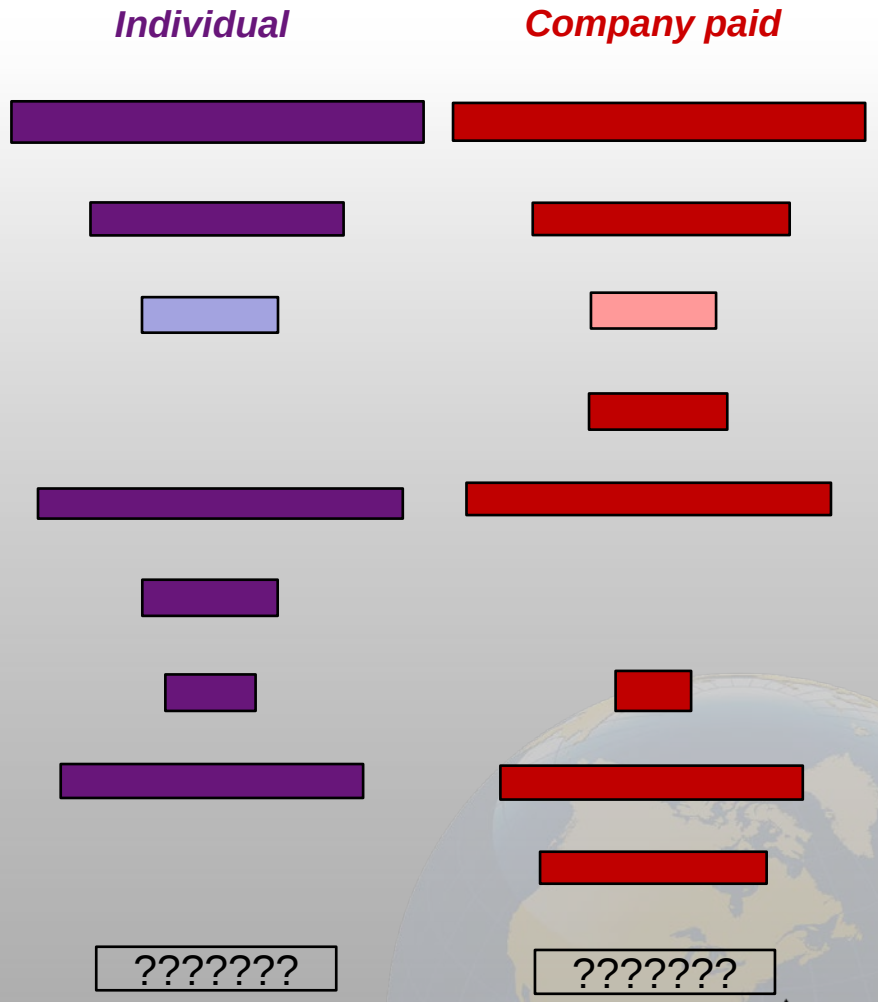
Source: Bupa Analysis

IPT RATES	
Oct-94	2.5%
Oct-97	4.0%
Jul-99	5.0%
Jan-10	6.0%
Nov-15	9.5%
Oct-16	10.0%

Source: HMRC

Key Risk Drivers
Relative Predictive Value

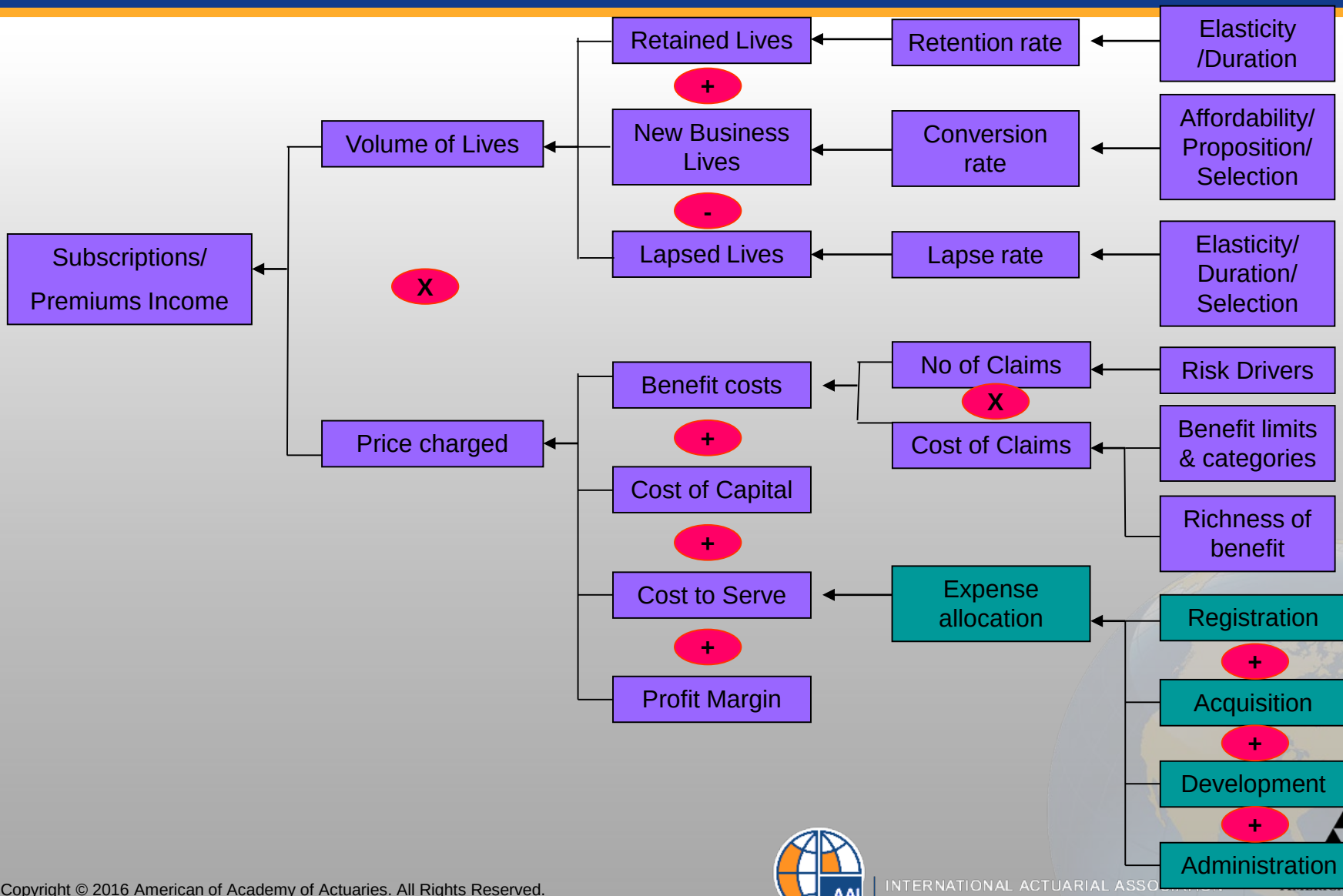
Risk Factors (Where Permitted)



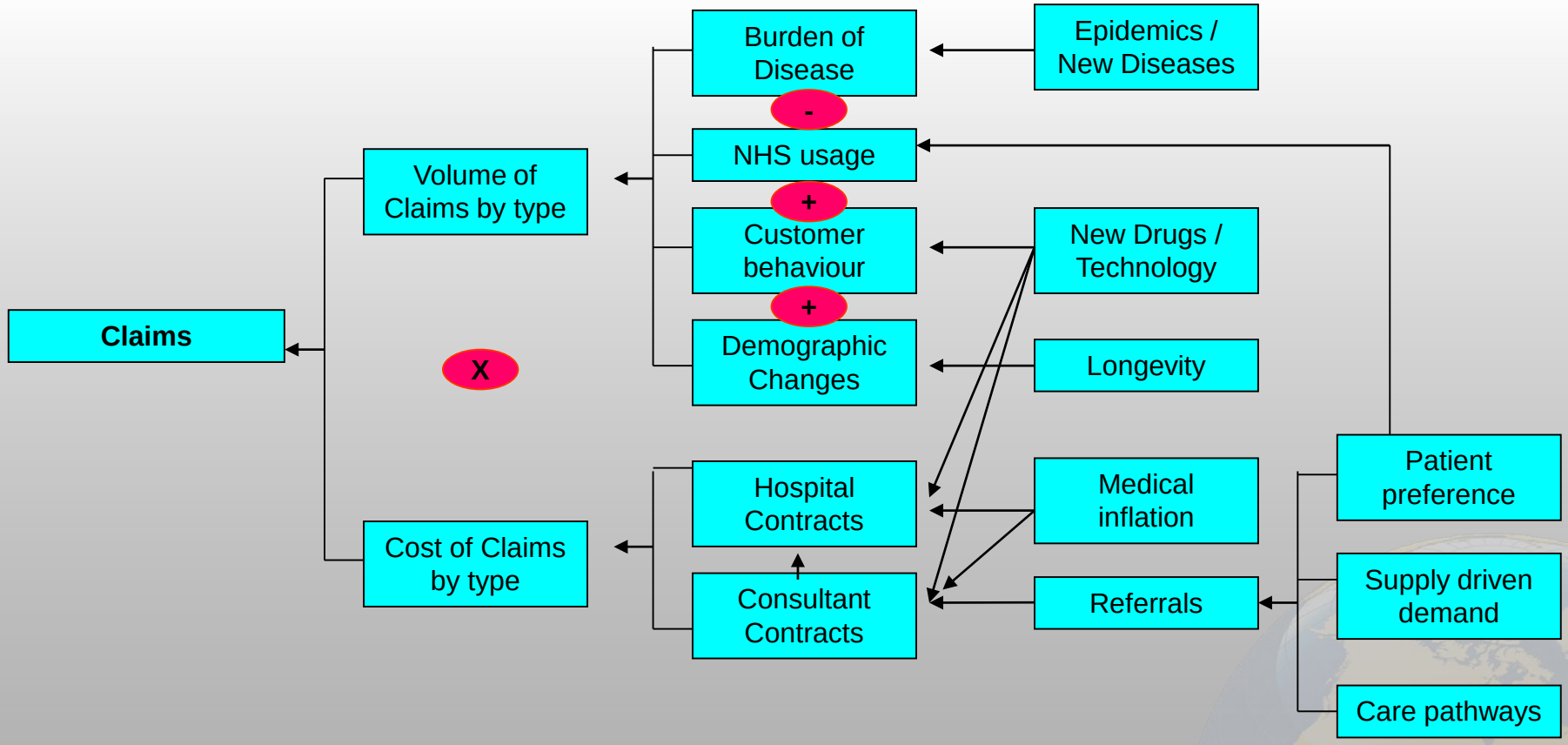
** Note: gender not used as a rating factor from Dec 2012*

"There is no bad risk, just a bad assessment of price"

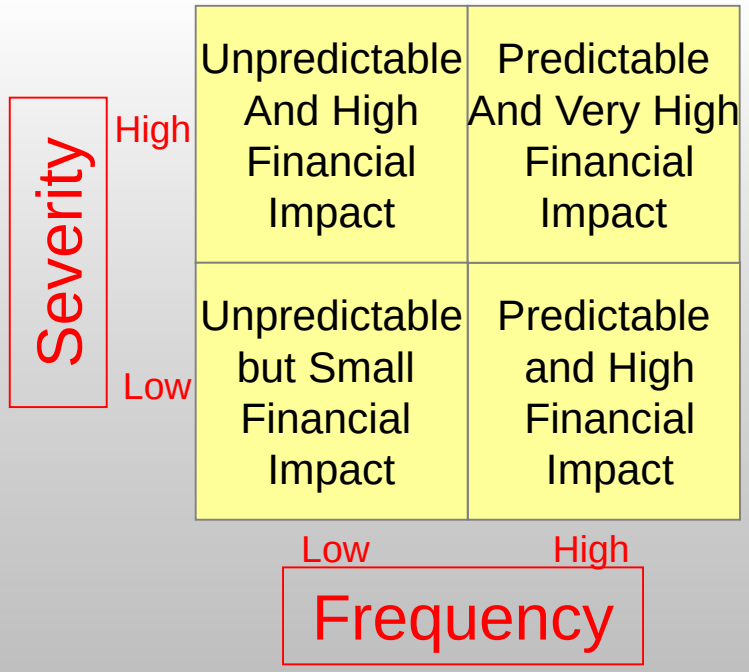
Key Risk Drivers
Premiums and Expenses

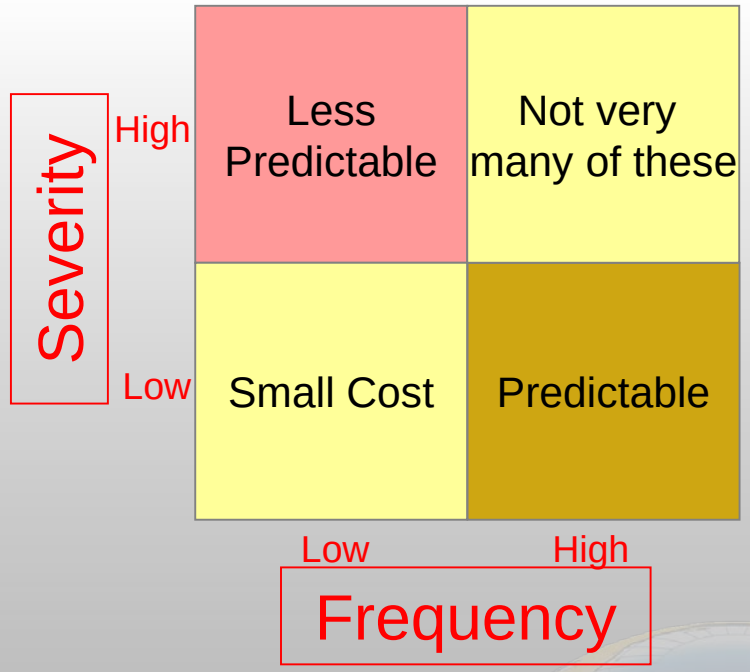


Key Risk Drivers
Claims



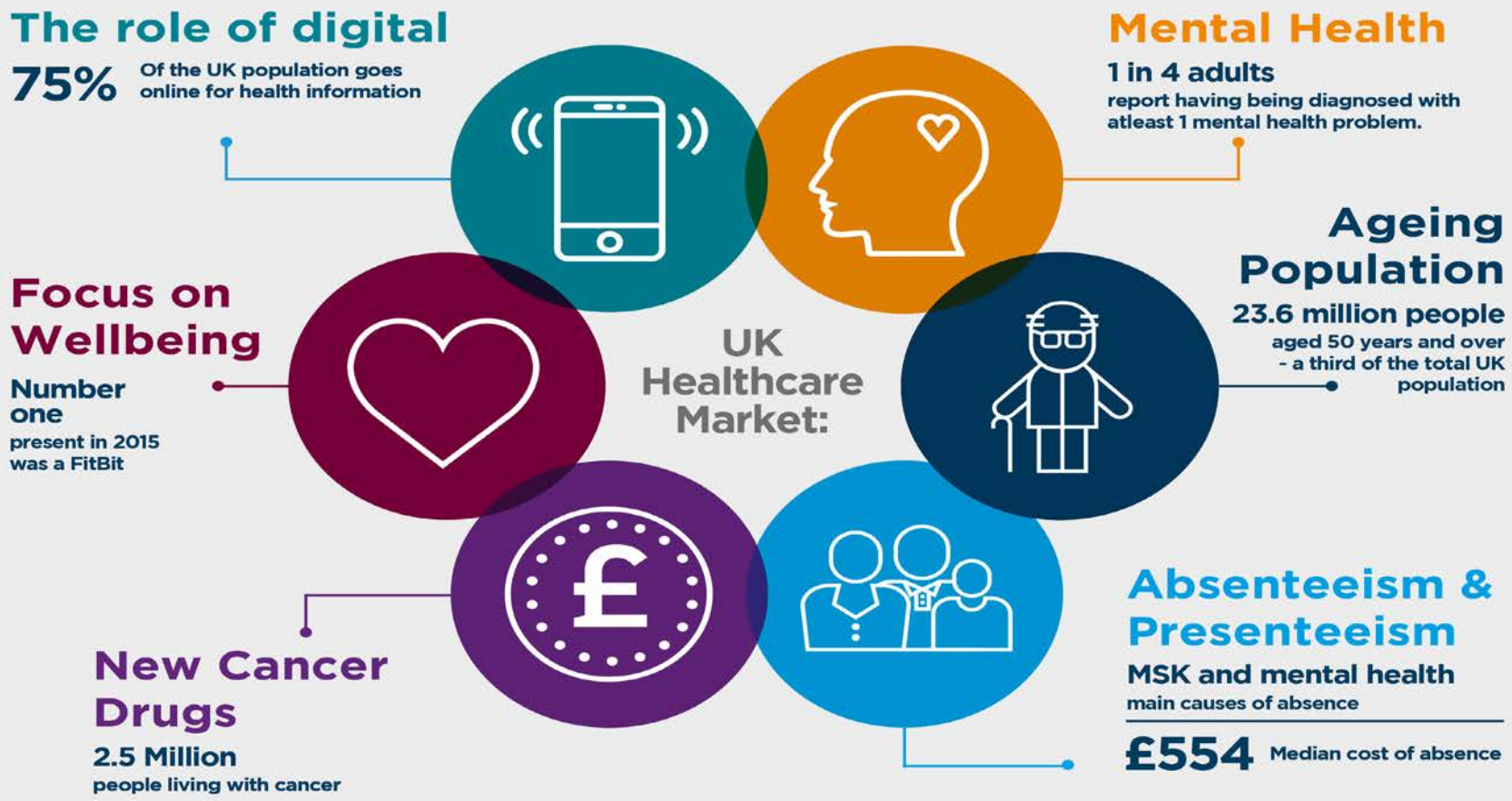
Claims Risk Classification





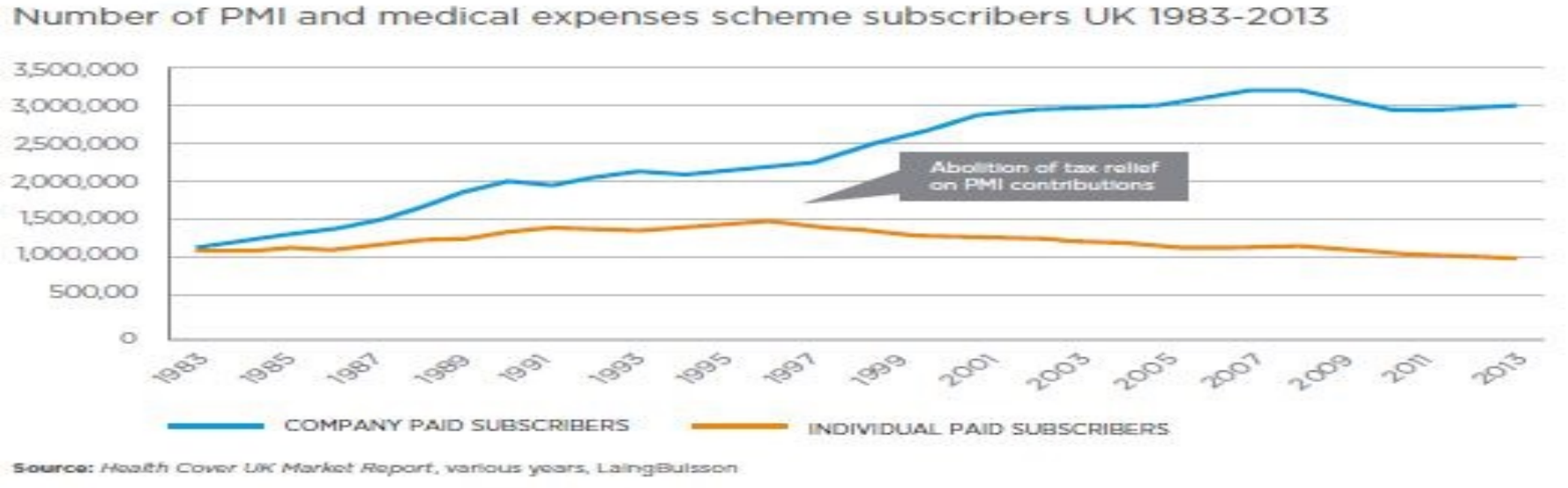
- In UK PMI, less high frequency low severity claims than in other markets since GP visits and prescription drugs are covered by NHS
- Exposure to epidemics / catastrophe risk also borne by NHS
- Accidental events also largely covered by NHS

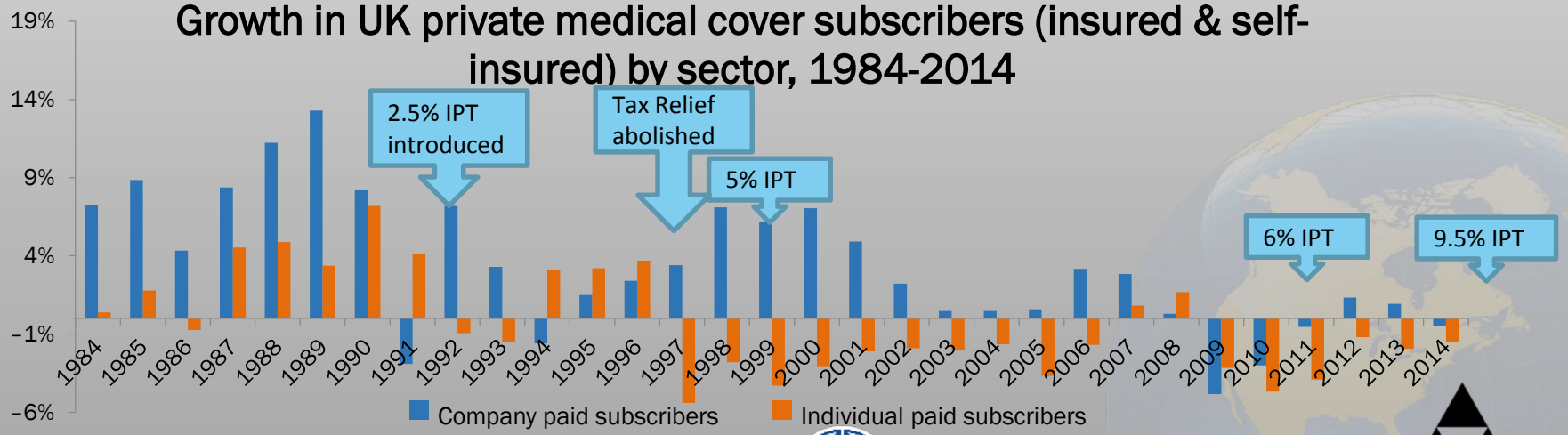
Drivers of health and wellbeing



Source: Bupa Client Marketing Material

PMI Market Coverage Tax Drivers?





Source: Laing & Buisson Healthcare Market Review; Bupa Analysis

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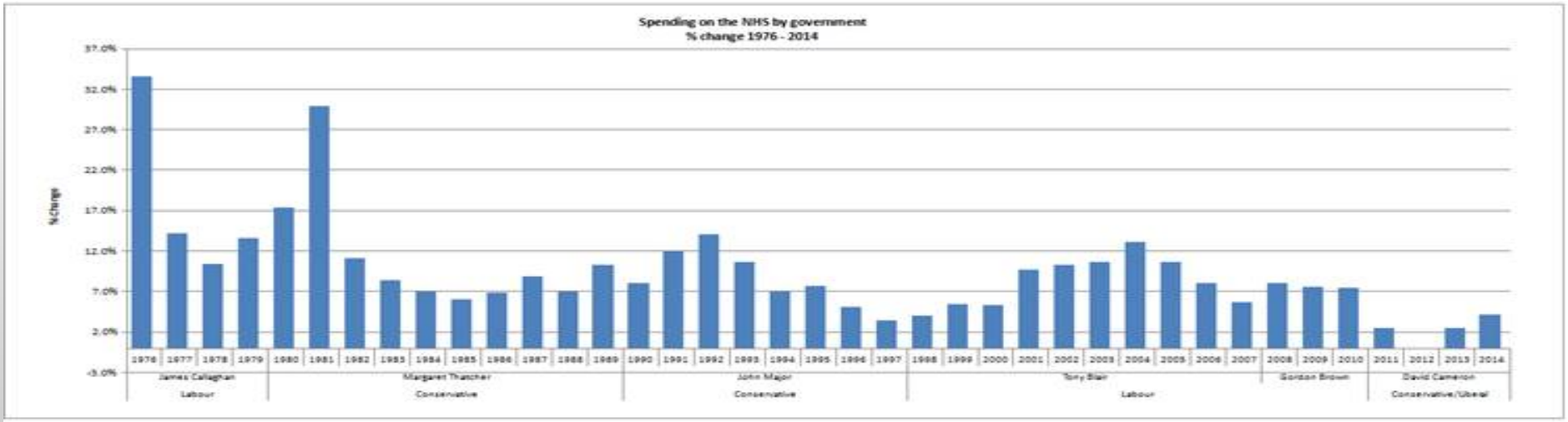
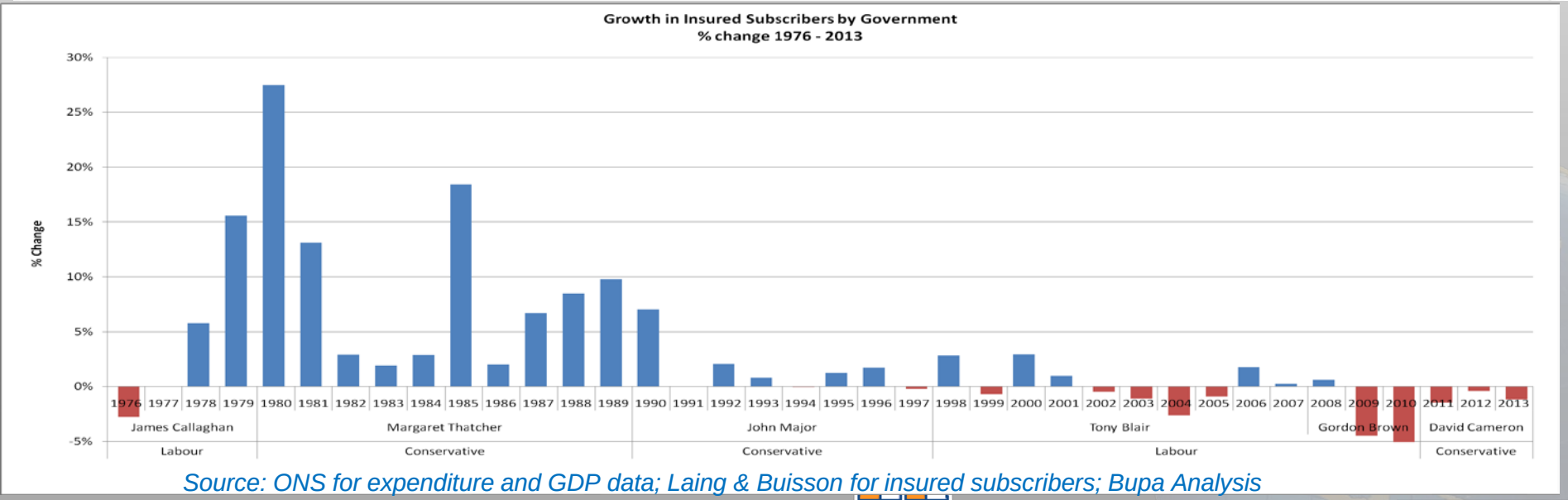
PMI Market Coverage
NHS Spending Driving PMI Take-up?





Source: ONS for expenditure and GDP data; Laing & Buisson for insured subscribers; Bupa Analysis

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Long-Term Care

Long-Term Care for Aging Population

- State support differs in England, Wales, Scotland or Northern Ireland - may be subject to means testing and may not be sufficient for full LTC cost.
- If savings and assets > £23,250 in England, required to self-fund LTC.
- Government looking to change funding:
  - Dilnot Commission on Funding of Care & Support in 2010; Report Summer 2011
  - Dilnot reforms include a capped cost model and extension of means tested support.
  - Initially due for implementation in 2016, these are now postponed until April 2020.
  - Where public finances used to fund social care, should be raised and delivered at a local level (created 2% Council Tax precept, effectively hypothecated taxation.)
  - From 2017/18, available funds will be included in an “improved” Better Care Fund.
- Types of long term care plans:
  - Immediate Needs Annuities - Pay a guaranteed income for life to help cover the cost of care fees in exchange for a one-off lump sum payment
  - Pre-funded Care Plans – Insuring future care needs (no longer sold)
  - Impaired Life Annuities - Pension buys an enhanced annuity if annuitant has a health problem (subject to full medical underwriting)
  - Equity Release Plans – Gives a cash lump sum as a loan secured on home – these can be used to fund a care plan

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UK Health Care System Issues Ahead and Trends

Political and Economic Dimensions

- NHS Reform / Transformation / Commissioning
- Possible Corbyn-led Labour Opposition/ future govt: ‘renationalise’ NHS
- Continued rise in IPT – hypothecation possible to fund NHS Deficits
- Introduction of communitisation / pricing regulation possible
  - Guaranteed issue and/or renewability
  - Mandated benefits to socialise costs for the public good
  - Risk equalisation (e.g., Australia)
  - Minimum “loss ratios” (e.g., US)
- Increased regulatory oversight of private sector increasing
  - Insurance: Prudential Regulatory Authority & Financial Conduct Authority
  - Private Care: Care Quality Commission (CQC)
- Brexit impacts on economy, care costs, and regulation (e.g., Solvency 2)

Social and Technology Dimensions

- Changing understanding, attitude, or commoditisation of insurance.
- Cultural attitude towards cross-subsidizing the burden of disease.
- High cost or experimental treatments (e.g., rare cancers requiring exotic drugs not funded under NHS).
- How will you say ‘NO’?
- New technologies and personalised medicine potentially driving up costs.
- Wearable devices for fitness ... and illness.
- Emergence of health ‘apps’.
- Elusive search for wellness solutions.
- Virtual GPs.

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UK Health Care System
Role of Actuaries

Challenges for UK Health Care Actuaries

- Helping the NHS reduce its deficit through robust data analytics to ensure greater efficiency in the use of scarce resources.
- Mostly involved in a private insurance market which has been in systemic decline for 20 years.
- Possible public / private partnerships need advice.
- Solvency 2 implementation still bedding in (t+279 days) ... and post Brexit we may have something different.
- Aging UK population its impact on NHS and crisis of shortage of social care.
- Small profession and *not* seen as ‘sexy’.
- Big data in health – will actuaries be overtaken by data scientists or reinvent themselves?

Thank You

Question and Answer

Question and Answer Session

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Appendix

International Context & Comparisons

Health Care Cost

Country	% of GDP	Per Capita (US $ PPP)
Canada	10,2	4 614
Chile	7,8	1 748
Australia	9,3	4 420
France	11,0	4 415
Netherlands	10,8	5 343
Sweden	11,1	5 228
UK	**9,8**	**4 015**
US	16,9	9 451
OECD Average	9,0	**3 740**

2015 OECD – excludes workers' comp and medical research

Health Care Cost Split

Country	% Public	% Private Ins	% OOP
Canada	70,8	14,9	14,3
Chile	61,1	6,1	32,8
Australia	66,7	13,6	19,7
France	78,6	14,4	7,0
Netherlands	80,7	7,0	12,3
Sweden	83,7	0,8	15,5
UK	**79,0**	**6,3**	**14,8**
U.S.	49,4	39,1	11,5
OECD Average	**72,9**	**6,9**	**20,1**

2015 or nearest year OECD Costs

Health Care Resources

Country	Physicians	Nurses	Hospital Beds
Canada	2,6	9,8	2,7
Chile	2,0	2,0	2,1
Australia	3,5	11,6	3,7
France	3,3	9,6	6,2
Netherlands	3,4	10,0	4,7
Sweden	4,1	11,2	2,5
UK	**2,8**	**8,2**	**2,7**
U.S.	2,6	11,2	2,9
OECD Average	**3,0**	**9,2**	**3,4**

2015 or nearest year OECD numbers per 1,000 population

Health Care Utilization

Country	Doctor Visits	Hospital Discharges	MRI Scans	CT Scans
Canada	7,6	84,4	54,9	148,5
Chile	3,5	94,5	15,1	75,3
Australia	7,3	172,4	35,3	115,5
France	6,3	164,8	95,5	187,9
Netherlands	8	118,6	51,2	79,4
Sweden	2,9	157,6	?	..
UK	**5**	**129,0**	**40,4**	**75,7**
U.S.	4	125,5	109,5	254,7
OECD Average	**5,7**	130,9	**57,4**	**133,9**

2015 or nearest year OECD numbers per 1,000 population

Health Care Outcomes – 2015

Country	Infant Mortality per 1,000	Female Life Expectancy	Male Life Expectancy
Canada	4,8	83,6	79,4
Chile	7,0	81,6	76,4
Australia	3,4	84,4	80,3
France	3,5	86,0	79,5
Netherlands	3,6	83,5	80,0
Sweden	2,2	84,2	80,4
UK	**3,9**	**83,2**	**79,5**
U.S.	6,0	81,2	76,4
OECD Average	**4,3**	**83,5**	**79,0**

2015 or nearest year OECD numbers

Prescription Drugs

Country	Pharma(US$PPP)
Canada	761
Chile	228
Australia	590
France	**622**
Netherlands	397
Sweden	496
UK	**420 est**
U.S.	1034
OECD Average	517

2013 OECD

France's costs among the highest?

Higher usage

Lifestyle Metrics

Country	Alcohol litres/yr age 15+	% Smokers age 15+	% Obesity self-reported	Lifestyle Index
Canada	8.0	14.9	18.2	92
Chile	7.9	29.8	12.1	104
Australia	9.9	12.8	21.8	101
France	9.1	24.1	14.5	101
Netherlands	9.1	18.5	11.8	82
Sweden	7.4	10.7	11.7	64
UK	**9.7**	**20.0**	**20.0**	**110**
US	8.8	13.7	28.7	123
OECD Average	8.9	19.8	15.5	95

2013 OECD numbers per 1,000 population with Have Associates Lifestyle Index