The Inverse Care Law
Development workshop with Prof Chris Bentley
The story so far.....

• 40 years ago
• A new opportunity
• A lot of thinking
• Clarification
CMO

- Draw people in
- Tight enough in primary care to create change
- Loose enough to engage everyone
Aims from today

- Development milestones.
- Development support needs (in detail for next 6 months).
- Metrics framework to support local teams in QI methodology consistent with delivery outcomes.
Taking on Inequalities in Health and Wellbeing Locally
Inverse Care Law Programme

1. Refining aims and objectives

Professor Chris Bentley
HINST Associates
Circulatory Disease Mortality Rates, 1993-2010
Sheffield and England & Wales

Rate per 100,000 resident population

Year


E&W Rate Sheffield Rate Baseline (1995-97) OHN Target
Forecast 95% Forecast Interval E&W Forecast

C Bentley
2007
Circulatory disease mortality rates

Mortality rate per 100,000 population

Whole communities
Deprived quintile

South Yorkshire NHS
Public Health Network

C Bentley
2007
'Spearhead' deaths as a % of England total: 2006 to July 2011
month by month counts and 12 months smoothed - ONS provisional death registrations

T Hennell 2011
Circulatory <75 standardised mortality: Spearhead Gaps
change in absolute gap between annual mortality rates for spearhead areas and the England average

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<td>-60%</td>
<td>-50%</td>
<td>-40%</td>
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<tr>
<td>Male</td>
<td>-60%</td>
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<td>-40%</td>
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<td>Female</td>
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<tr>
<td>Target reduction</td>
<td>-60%</td>
<td>-50%</td>
<td>-40%</td>
<td>-30%</td>
<td>-20%</td>
<td>-10%</td>
<td>0%</td>
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</tbody>
</table>
Well being and Health

Physiological risks
- High blood pressure
- High cholesterol
- Stress hormones
- Anxiety/depression

Behavioural risks
- Smoking
- Poor diet
- Lack of activity
- Substance abuse

Psycho-social risks:
- Isolation
- Lack of social support
- Poor social networks
- Low self-esteem
- High self-blame
- Low perceived power
- Loss of meaning/purpose of life

Risk conditions – e.g.:
- Poverty
- Low social status
- Poor education
- Unemployment
- Dangerous environments
- Discrimination
- Steep power hierarchy
- Gaps/weaknesses in services and support

After Ronald Labonte
Health & Well being

Physiological risks
- High blood pressure
- High cholesterol
- Stress hormones
- Anxiety/Depression

Behavioural risks
- Smoking
- Poor diet
- Lack of activity
- Substance abuse

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- Gaps/weaknesses in services and support

Health Seeking Behaviour

After Labonte
Health Inequalities

Different Gestation Times for Interventions

For example intervening to reduce risk of mortality in people with established disease such as CVD, cancer, diabetes

For example intervening through lifestyle and behavioural change such as stopping smoking, reducing alcohol related harm and weight management to reduce mortality in the medium term

For example intervening to modify the social determinants of health such as worklessness, poor housing, poverty and poor education attainment to impact on mortality in the long term
White Circle = Area of Concern eg. Health Inequalities
Green Circle = Action under your direct control
Orange Circle = Area of influence

- Concern
- Influence
- Control
Yellow Circles = Elements within Circle of Concern

- Employment
- Poor Diet
- Control
- Influence

Concern
Life expectancy and disability free life expectancy at birth, persons by neighbourhood income level, England, 1999-2003

Age

Life expectancy
DFLE
Pension age in 2024
Poly. (DFLE)
Poly. (Life expectancy)

Neighbourhood Income Deprivation - Population Percentile

Source: ONS
Gap in male life expectancy in Barnsley by disease

- All circulatory diseases, 33%
- All cancers, 21%
- Respiratory diseases, 16%
- Digestive, 10%
- External causes, 6%
- Infectious and parasitic diseases, 2%
- Other, 9%
- Deaths under 28 days, 4%
Premature morbidity

- Dementia (atherosclerotic; alcohol related)
- Heart disease (angina; heart failure)
- Stroke
- Diabetic complications (poor sight; renal failure; circulatory problems/amputation)
- Respiratory failure
- Liver disease
- Arthritis
- Neurotic illness (anxiety; depression)
- Neurological disorders
Major burden of disease – leading 10 selected risk factors in developed countries

(% cause of disease burdens measured in Disease Adjusted Life Years)
The Inverse Care Law Programme will ...

• achieve **measureable improvement** in **healthy life expectancy and wellbeing**, for a **defined population**, with a reduction in the degree of **variation of healthy life expectancy** between **socioeconomic groups**.

• improve **healthy life expectancy** and **reduce health inequities** through the **targeted** provision of **high quality, integrated and community focussed services**. **Improved measures of wellbeing and empowerment**, for individuals and local communities, will also be important aspects of this work.
Taking on Inequalities in Health and Wellbeing Locally
Inverse Care Law Programme

2. Percentage change at population level

Professor Chris Bentley
HINST Associates
Population Level Interventions

• Legislation
• Regulation; licencing; by-laws
• Taxation
• Welfare benefits
• Working conditions
• Healthy public policy
• Campaigns
Population Level Interventions

• Don’t rely on ‘trickledown’ of impacts and benefits of national and local policy, legislation etc.. Needs strategic, intelligence driven, approaches to advice; support; enforcement

• Strong facilitated strategic alliances (tobacco; alcohol; housing)

• Combining knowledge and resources (Manchester Older Peoples Strategy vested in JHU; Bristol, health advisor placed in City Planning and Transport)

• Combined action for implementation support (Barking and Dagenham smoking in public places; Warrington City Centre alcohol harm reduction)

• Strong, meaningful and timely Impact Assessments
Population Level Interventions

- Systematic and scaled interventions through services
- Intervention Through Services
- Intervention Through Communities

Producing Percentage Change at Population Level

C. Bentley
2007
Achieving percentage change in population outcomes through services

Programme characteristics will include being :-

- **Evidence based** – concentrate on interventions where research findings and professional consensus are strongest

- **Outcomes orientated** – with measurements locally relevant and locally owned

- **Systematically applied** – not depending on exceptional circumstances and exceptional champions

- **Scaled up appropriately** – “industrial scale” processes require different thinking to small “bench experiments”

- ** Appropriately resourced** – refocus on core budgets and services rather than short bursts of project funding

- **Persistent** – continue for the long haul, capitalising on, but not dependant on fads, fashion and policy priorities
Population Level Interventions

Intervention Through Communities

Intervention Through Services

Systematic community engagement

Producing Percentage Change at Population Level

C. Bentley

2007
Communities of engagement

- Neighbourhoods
- Cultural communities
- Faith communities
- Schools; workplaces

- Clubs and associations (Social; Sport; Unions)
- Social media

- Gangs
Industrial Scale - Stalinist
Piecemeal Project Based Approach
Industrial Scale  -  “Small is beautiful”
Not infinite, but graded levels of Engagement
Danger of Commissioning Group Variability
Population Level Interventions

- Intervention Through Services
- Intervention Through Communities
  
  Service engagement with the community

Producing Percentage Change at Population Level

C. Bentley
2007
Systematic service engagement with the community

- Infrastructure support for the Third ‘Sector’ (financial services; recruitment/HR; training; contracting support)
- Joint learning sets with commissioners
- Encourage fora supporting ‘equity groups’
- Mechanisms to engage with HWB and sub-structures; representation with backup into support
- Good practice: survey Third Sector organisations (and their client group):
  - Connectivity with JSNA/HWB priorities
  - Preferred methods for communication (2-way)
- It is not ‘groups’ that are ‘hard to reach’, but individuals and families who don’t join groups
- Important role for Champions programmes: community based researchers; peer support workers; advocates
Partnership, Vision and Strategy, Leadership and Engagement

Population Level Interventions

Systematic and scaled interventions through services

Systematic community engagement

Intervention Through Services

Service engagement with the community

Intervention Through Communities

Producing Percentage Change at Population Level C. Bentley 2007
Leadership and Coordination

• Partnership
Not just at the top of organisations, or on the frontline. Middle management often maintain silo working. Attention to governance.

• Leadership
At all levels. Develop skills. Succession plan

• Vision and Strategy
Not ‘pink and fluffy’. Tangible, with numbers.
Assess the readiness at points 1, 2, 3, and 4 to support %age change at population level in your Health Board area.
Taking on Inequalities in Health and Wellbeing Locally
Inverse Care Law Programme

3. Putting numbers into strategies

Professor Chris Bentley
HINST Associates
Numbers into strategies

• What is our ambition? What realistic but testing target are we aiming for?
• Can this be stated in terms that are easily understood and ‘owned’ by local stakeholders? In particular can it be pinned down to numbers?
• What are the main contributory factors responsible for the current adverse situation?
• What interventions could contribute substantially to these sort of numbers? Can they be delivered with sufficient system, scale and sustainability?
• Can a realistic business case be developed to demonstrate appropriate return on
Male All Age All Cause Mortality (AAACM) Rates by GP Consortia, 2007-09

*Peer group = Former Spearhead PCTs in ‘Centres with Industry’ ONS area classification
Estimating the scale of the challenge (Males)

Oldham Male AAACM rate 2001-2009, forecast and trajectory to 2013-15 ambition

270 fewer deaths in 2013-15 expected based on current trend

Equivalent to 417 (13%) fewer male deaths in 2013-15

Target
Actual
Forecast

Male AAACM per 100,000
## Estimating the scale of the challenge: Summary

### Reductions in mortality numbers necessary to meet 2013-15 targets

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<tbody>
<tr>
<td><strong>Males</strong></td>
<td>833.6</td>
<td>721.2</td>
<td>3100</td>
<td>2683</td>
<td>417</td>
<td>270</td>
</tr>
<tr>
<td><strong>Females</strong></td>
<td>597.7</td>
<td>497.8</td>
<td>3410</td>
<td>2774</td>
<td>636</td>
<td>297</td>
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<tr>
<td><strong>Person(s)</strong></td>
<td>-</td>
<td>-</td>
<td>6510</td>
<td>5457</td>
<td>1053</td>
<td>567</td>
</tr>
</tbody>
</table>
Identifying ‘excess’ mortality by age group

Number of excess deaths by age group in Oldham compared to England average, 2006-08

Excess deaths 2006-08 (persons)

Age group

Source: Derived from London Public Health Observatory Health Inequalities Intervention Tool data
Identifying ‘excess’ mortality by cause

Number of excess deaths in Oldham by cause, gender and broad age group compared to England average, 2006-08

Source: Derived from NCHOD standardised mortality ratios (SMR) and mortality numbers by age and cause.

Excess mortality = ‘observed’ minus ‘expected’ deaths
### Potential impact of evidence-based interventions on reducing mortality numbers

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<th>Intervention</th>
<th>Deaths postponed</th>
<th>Treatment population</th>
<th>NNT to postpone one death</th>
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<td><strong>Secondary prevention following CVD event</strong></td>
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<tr>
<td>Four treatments (beta blocker, aspirin, ACE inhibitor, statin)</td>
<td></td>
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<tr>
<td>Currently untreated: CVD deaths averted</td>
<td>31</td>
<td>4,335</td>
<td>136</td>
</tr>
<tr>
<td>Currently partially treated: CVD deaths averted</td>
<td>61</td>
<td>15,335</td>
<td>253</td>
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<tr>
<td><strong>Additional treatment for hypertensives</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Additional hypertensive therapy</td>
<td>62</td>
<td>38,053</td>
<td>425</td>
</tr>
<tr>
<td>Statin treatment for hypertensives with high CVD risk</td>
<td>27</td>
<td>38,053</td>
<td>425</td>
</tr>
<tr>
<td><strong>Warfarin for atrial fibrillation &gt;65 years</strong></td>
<td></td>
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<tr>
<td>Stroke deaths averted</td>
<td>17</td>
<td>609</td>
<td>35</td>
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<tr>
<td><strong>Improving diabetes management</strong></td>
<td></td>
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<tr>
<td>Reducing blood sugars (HbA1c) over 7.5 by one unit</td>
<td>13</td>
<td>3,092</td>
<td>232</td>
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<tr>
<td><strong>Treating CVD risk among COPD patients</strong></td>
<td></td>
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<tr>
<td>Statins for eligible mild &amp; moderate COPD patients</td>
<td>45</td>
<td>1,833</td>
<td>40</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>258</strong></td>
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NNT = Number Needed to Treat to postpone one death
**Aim:** Deliver a short-term plan to place the PCT on a target AAACM trajectory for males

**The Plan:** *Focus on six evidence based interventions:*

1. Full implementation of evidence based treatments for patients with CVD who are currently untreated
2. Full implementation of evidence based treatments for patients with CVD who are currently partially treated
3. Finding and treating undiagnosed hypertensives
4. Moving patients on Atrial Fibrillation registers from aspirin to warfarin
5. Statins to address CVD risk among COPD patients.
6. Reducing blood sugar in diabetic patients

**Expected Outcomes**

- Improved management of primary and secondary prevention of CVD
- Postponement of up to 257 deaths from CVD if the interventions are fully implemented, although this would depend on pace of incremental delivery
- Achieving 38% of full implementation of all interventions would deliver the AAACM target although again this depends on pace of incremental delivery

*Source: Rochdale PCT AAACM Recovery Plan, Nov 2010*
Using the model: a worked example (3)

- **Intervention:**
  Statins to address CVD risk among patients with mild or moderate COPD

- **Evidence Base:** Observational studies show CVD is the leading cause of mortality among patients with mild and moderate COPD, yet CVD risk is often untreated among this patient group

- **Treatment population:**
  Aim to increase coverage from **26%** to **66%** of all COPD patients. (Current treatment coverage of 26% estimated from local audit of COPD registers plus estimate of undiagnosed COPD from APHO prevalence estimate.) Equates to an additional **2,450** COPD patients on a statin

- **Outcomes:**
  Estimated **55** deaths prevented (*consistent with model which shows effect of additional 40% COPD patients on a statin*)

- **Costs:**
  Recurrent costs of £95,000 (includes finding additional patients)
Wales

Male life expectancy, by local authority, 2007-2009

Years

65
75
80
85

Ceredigion
Powys
Morchesthire
Vale of Glamorgan
Flintshire
Denbighshire
Wrexham
Gwynedd
Pembrokeshire
Carmarthen
Conwy
Cardiff
Swansea
Torfaen
Isle of Anglesey
Newport
Bridgend
Neath Port Talbot
Caerphilly
Blaenau Gwent
Rhondda Cynon Taf
Merthyr Tydfil
Wales
All-cause mortality, under 75, males, European age-standardised rate (EASR) per 100,000, Aneurin Bevan HB and Wales, 2001-09

Produced by Public Health Wales Observatory, using ADDE/MYE (ONS), WIMD 2008 (WG)

- Most deprived within Aneurin Bevan (95% CI)
- Least deprived within Aneurin Bevan
- Wales EASR
- Aneurin Bevan overall

Rate Ratio - most deprived divided by least deprived

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<th>Year</th>
<th>Rate Ratio</th>
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<td>2001-03</td>
<td>2.1</td>
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<tr>
<td>2002-04</td>
<td>2.0</td>
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<tr>
<td>2003-05</td>
<td>1.9</td>
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<td>2004-06</td>
<td>2.3</td>
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<td>2005-07</td>
<td>2.4</td>
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<tr>
<td>2006-08</td>
<td>2.3</td>
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<tr>
<td>2007-09</td>
<td>2.1</td>
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All age, all cause mortality rates, 3-year averages, Kent & Medway
Life expectancy and disability free life expectancy at birth, persons by neighbourhood income level, England, 1999-2003

Source: ONS
Life Expectancy by Deprivation Deciles, showing the Slope Index of Inequality
Maidstone, Males, 2006-10
Slope Index of Inequality = 7.0 years (95% Confidence Interval: 4.5 to 9.4)
Life Expectancy by Deprivation Deciles, showing the Slope Index of Inequality
Maidstone, Males, 2006-10
Slope Index of Inequality = 7.0 years (95% Confidence Interval: 4.5 to 9.4)
Swale: Circulatory disease mortality by ward

Mortality rate for circulatory disease aged under 75, 2006-2010, both sexes

Source: NCHOD, PHMF and ONS CAS estimates

Electoral ward    Swale    England

Electoral ward / area
Swale: Causes of excess mortality, worst quintile compared to rest
Slope Index for Medway (Males)
Slope Index for Medway (Males)
Gravesham Slope Index of Mortality for Males (years)

Life Expectancy by Deprivation Deciles, showing the Slope Index of Inequality
Gravesham CD, Males, 2005-09
Slope Index of Inequality = 9.1 years (95% Confidence Interval: 5.8 to 12.3)
Deprivation in Dartford Compared to UK
Dartford Life Expectancy

Life Expectancy by Deprivation Deciles, showing the Slope Index of Inequality
Dartford CD, Males, 2005-09
Slope Index of Inequality = 8.1 years (95% Confidence Interval: 4.8 to 11.5)
Barnsley – Deprivation Quintiles
Barnsley Life Expectancy

Life expectancy at birth (years)

Quintile 1 | Quintile 2 | Quintile 3 | Quintile 4 | Quintile 5

M = Males  F = Females

95% confidence interval. These indicate the level of uncertainty about each value on the graph. Longer/wider intervals mean more uncertainty.

4

5 - most deprived quintile
Aneurin Bevan Health Board
Welsh Deprivation Quintiles
Cwm Taff Health Board
Welsh Deprivation Quintiles
Health Inequalities

Different Gestation Times for Interventions

For example intervening to reduce risk of mortality in people with established disease such as CVD, cancer, diabetes

For example intervening through lifestyle and behavioural change such as stopping smoking, reducing alcohol related harm and weight management to reduce mortality in the medium term

For example intervening to modify the social determinants of health such as worklessness, poor housing, poverty and poor education attainment to impact on mortality in the long term
Process

- Choose your benchmarks
- Work in numbers (people) rather than rates
- Pace of change
- Set challenging but potentially achievable targets
Taking on Inequalities in Health and Wellbeing Locally Inverse Care Law Programme

4. Implementation decay

Professor Chris Bentley
HINST Associates
Community Engagement Barriers in Birmingham
Disease management provided according to evidence-based protocols e.g. NSFs or NICE guidance

<table>
<thead>
<tr>
<th>High Risk</th>
<th>Have LTC</th>
<th>Aware of LTC</th>
<th>Eligible for treatment</th>
<th>Optimal treatment</th>
<th>Compliant with treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHD</td>
<td>5.7m</td>
<td>2.6m</td>
<td>2.3m</td>
<td>1.3m</td>
<td>1m</td>
</tr>
<tr>
<td>Diabetes</td>
<td>2.8m</td>
<td>1.8m</td>
<td>1.8m</td>
<td>0.4m</td>
<td>Not known</td>
</tr>
<tr>
<td>CHF</td>
<td>0.9m</td>
<td>0.48m</td>
<td>0.21m</td>
<td>0.1m</td>
<td>0.08m</td>
</tr>
<tr>
<td>COPD</td>
<td>2.9m</td>
<td>0.9m</td>
<td>0.52m</td>
<td>0.26m</td>
<td>0.14m</td>
</tr>
</tbody>
</table>

NOTE: Figures are for UK. Taken from Harrison W, Marshall T, Singh D & Tennant R “The effectiveness of healthcare systems in the UK – scoping study”; Department of Public Health & Epidemiology and HSMC University of Birmingham, July 2006.
Benefit from evidence based interventions across populations (not to scale)

Cold damp housing/Affordable warmth:
- Have the problem
- Aware of problem
- Eligible for intervention
- Optimal input
- Best use of systems

Managing alcohol/Related harm:
- Have the problem
- Aware of problem
- Eligible for treatment
- Optimal therapy
- Compliance with therapy
Benefit from evidence based interventions across populations
(not to scale)

Have the problem    Aware of problem    Eligible for intervention    Optimal intervention    Compliance with plan

A    B    C    D
A. Awareness and understanding

- ‘seldom heard’ not ‘hard to reach’
- most groups; channels exist but are not being used
- problem is isolated individuals not part of groups; need Champions
Benefit from evidence based interventions across populations (not to scale)

<table>
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<th>Eligible for intervention</th>
<th>Optimal intervention</th>
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<tbody>
<tr>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
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A
B
C
D
B. Presentation and Assessment

- No wrong door; minimal ‘hand-offs’ along pathways
- Lines of communication between partners
- Community based advocates
Benefit from evidence based interventions across populations
(not to scale)
C. Quality of Service

- Inefficient service
- Ineffective practitioner
- Unresponsive service – not committed to outcome
Benefit from evidence based interventions across populations
(not to scale)

Have the problem  Aware of problem  Eligible for intervention  Optimal intervention  Compliance with plan

A  B  C  D
D. Support for Self Management

- User not part of decision making on plan
- One-size-fits-all education/self-management support
- Use of peer and community support from those with similar issues?
Don’t just gesture in the direction of inequalities
Give your policies teeth
Target ways of halting the decay
Task

For each of A, B, C and D, in your Health Board:
- What are the Assets?
- What are the main Gaps and Barriers?
Taking on Inequalities in Health and Wellbeing Locally Inverse Care Law Programme

5. Best population outcomes from interventions

Professor Chris Bentley
HINST Associates
The diagnostic model will support the systematic delivery of the best health outcomes from a given set of interventions.

It is based on the assumption that the aim is to achieve **optimal health improvement at population level, embracing minimal health inequalities.**
Commissioning for Best Outcomes

Population Focus

Optimal Population Outcome

Challenge to Providers

1. Known Intervention Efficacy
2. Local Service Effectiveness
3. Cost Effectiveness
4. Accessibility
5. Engaging the Public

11. Adequate Service Volumes
12. Balanced Service Portfolio
13. Networks, leadership and coordination

This side of the diagram shows aspects of service provision that will influence achievement of best service outcomes from a particular set of interventions.
Services should be based where possible on strong evidence. However, *efficacy*, based on experimental trials must translate into *effective* local intervention. This must be constantly checked through local audit and systems of governance.
### Potential impact of evidence-based interventions on reducing mortality numbers

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<td>Four treatments (beta blocker, aspirin, ACE inhibitor, statin)</td>
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</tr>
<tr>
<td>Currently untreated: CVD deaths averted</td>
<td>31</td>
<td>4,335</td>
<td>136</td>
</tr>
<tr>
<td>Currently partially treated: CVD deaths averted</td>
<td>61</td>
<td>15,335</td>
<td>253</td>
</tr>
<tr>
<td><strong>Additional treatment for hypertensives</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Additional hypertensive therapy</td>
<td>62</td>
<td>38,053</td>
<td>425</td>
</tr>
<tr>
<td>Statin treatment for hypertensives with high CVD risk</td>
<td>27</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Warfarin for atrial fibrillation &gt;65 years</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stroke deaths averted</td>
<td>17</td>
<td>609</td>
<td>35</td>
</tr>
<tr>
<td><strong>Improving diabetes management</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reducing blood sugars (HbA1c) over 7.5 by one unit</td>
<td>13</td>
<td>3,092</td>
<td>232</td>
</tr>
<tr>
<td><strong>Treating CVD risk among COPD patients</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Statins for eligible mild &amp; moderate COPD patients</td>
<td>45</td>
<td>1,833</td>
<td>40</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>258</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

NNT = Number Needed to Treat to postpone one death
A Poorly Performing Spearhead PCT

CHD 6 - % patients whose last BP reading <= 150/90 (measured in last 15 months)

Practice code

- Target Met
- Target Missed
- Exception Coded
A High Performance PCT

CHD 6 - % patients whose last BP reading $\leq 150/90$ (measured in last 15 months)

Practice code

Target Met  Target Missed  Exception Coded
Spearhead City

QOF non-clinical score by GP practice and deprivation

Ward deprivation score (2004)

QOF % non-clinical points achieved
Bolton GP Practices
‘Rainbow of Clusters’
Bolton GPs
Cluster Comparisons
Commissioning for Best Outcomes

Challenge to Providers

1. Known Intervention Efficacy
2. Local Service Effectiveness
3. Cost Effectiveness

Interventions need to be *affordable* to treat all those who could benefit, and *cost beneficial*, justifying the opportunity cost against alternative ways to spend.
Fig 7a - Prescribing Costs per Diabetic Pt (Apr 06-Mar 07) v Percentage of diabetic patients whose HbA1C has been 7.4 or less in the last 15 months (Apr 06-Mar 07)
Commissioning for Best Outcomes

Challenge to Providers

Bringing services closer to patients and communities may substantially improve uptake, presentation and utilisation. Patient pathways should be designed with this in mind.

However, there will possibly be tradeoffs between effectiveness, as interventions are moved away from specialists and specialist facilities, and cost effectiveness if the efficiencies of centralisation are lost.
Delivery systems for interventions should be based around, and directly respond to, the needs and wants of the person, rather than the person having to fit around the needs of the service.

Patient and community inputs should be drawn in systematically, not as a tokenistic add-on.
Categories of ‘seldom heard’ people

- **Hard to identify and contact** (e.g. rough sleepers, illegal immigrants)
- **Not available, no time** (e.g. families with young children, people working long hours, carers)
- **Hard for public agencies to communicate with** (e.g. non-English speakers, people with learning disabilities, people unable to read or write, those with hearing difficulties, those who are visually impaired)
- **Resistant to involvement with statutory bodies** (e.g. because they feel threatened), (e.g. tenant in arrears, mother in an abusive relationship)
- **Hard to engage on public bodies’ agendas** (e.g. young people on health issues)
- **Taken for granted.** Not hard to reach or engage with, but at risk of under-representation (e.g. white working class men).
Attention given to this array of provider-side aspects of delivery should produce good health service outcomes.

However, good population health outcomes will not be achieved without also addressing the way communities use the service.
It is now possible to get good estimates of health need, either from census, local survey, extrapolation from national surveys or, increasingly, from local clinical systems. Geographical systems can map down to tailored neighbourhoods, census output areas and population quintiles. There are still problems of obtaining good intelligence by ethnicity and other social groupings.
Commissioning for Best Outcomes

Population Focus

6. Known Population Needs

a) Neighbourhood Cluster Types eg:
- Older large estates
- New estates
- Rural and small towns
- Ex-Coalfields communities
- Mixed young families
- Established non-caucasian ethnic
- Mobile young
One of the major problems of obtaining optimal population health outcomes from service delivery is that people in deprived circumstances often do not present with major health problems until too late.

Barriers to presentation include structural issues such as poor access and transport; language and literacy problems; poor knowledge; low expectation of health and health services; fear and denial, and low self esteem.
Expected v Registered Prevalence of major QOF conditions

- Coronary Heart Disease: 2.3% (Expected), 4.8% (Registered)
- Hypertension: 10.8% (Expected), 24.2% (Registered)
- Diabetes*: 3.4% (Expected), 4.0% (Registered)
- COPD: 1.4% (Expected), 4.2% (Registered)

Spearhead PCT with Access Problems
Blackburn with Darwen

This PCT has been able to close the register gaps for CVD and Diabetes.
A quarter of patients with a history of CHD are estimated undiagnosed (untreated).
Identifying the untreated patients (GP practice)

CHD 6 - % patients whose last BP reading <= 150/90 (measured in last 15 months)

Practice code

Target Met | Target Missed | Exception Coded | undiagnosed based on Expected Prevalence
The most deprived patients are not recorded with higher disease burden (except for COPD and Mental Health)
Identifying patients not yet registered with target diseases

Reasons why appropriate patients are not appearing on registers:
• They have been diagnosed, but missed off the register
• They have been identified as possible, but without confirmed diagnosis
• They attend the practice, but the issue has not been raised
• They rarely, if ever, attend the practice
• They are not registered with a practice
Identifying barriers to attending services

Studies have identified reasons why people do not present to services:

- Geographical eg distance from clinic/practice; complex journey
- User unfriendly service access: frosty, bureaucratic reception; cultural/interpreter problems; perceived discrimination; appointment systems; access delays; opening hours; cost barriers
- Community knowledge, understanding, beliefs and expectation: about condition; about services; about life; stigma
- Personal beliefs and skills: demotivation; low expectations; low self-confidence; poor literacy; low-IQ etc

Corrective strategies need to explore each of these elements systematically

e.g. Angela Tod, Sheffield Hallam University
Vascular Checks in Bolton

- Everyone must be involved
  - Staff
  - Public
  - Local media
- Outreach
- Health trainers
- Local enhanced service
- Near patient testing
Islington CVD Mortality Audit

- 313 deaths
  - 257 registered with Islington GP
  - 42 registered with GP elsewhere
  - 14 not registered with any GP
  - 175 records linked to practice data
    - 54 not on electronic disease register
      - 51 GP notes available to review
    - 121 on electronic disease register
      - 116 GP notes available to review
In order to achieve equitable outcomes for deprived populations, resources applied need, firstly, to be *proportionate* to need. But they also need *disproportionate* supplements to reflect the extra effort and support required.
Primary Prevention of CHD
Exponential Incentivisation

- 30%  £  1.00
- 40%  £  1.50
- 50%  £  2.00
- 60%  £  3.00
- 70%  £  4.50
- 80%  £  6.50
- 90%  £  9.00
- 100% £12.00
83% of all patients were assessed by end March 2009

In November, the figures also showed that practices in the more deprived neighbourhoods had been supported to achieve the best results:

<table>
<thead>
<tr>
<th>Deprivation Score</th>
<th>No. Practices</th>
<th>% Assessed</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;40</td>
<td>14</td>
<td>79.4</td>
</tr>
<tr>
<td>30-39</td>
<td>18</td>
<td>73.7</td>
</tr>
<tr>
<td>20-29</td>
<td>12</td>
<td>75.2</td>
</tr>
<tr>
<td>&lt;20</td>
<td>11</td>
<td>74.3</td>
</tr>
</tbody>
</table>
When patients do express demand and present for service appropriately, and with resources targeted and available, services should respond actively to channel them effectively to interventions they will benefit from. This should happen regardless of entry point chosen. Patients should receive culturally sensitive help to navigate to relevant service, and should be followed up to ensure arrival and engagement.
Commissioners and providers should ensure that patients are empowered to make informed choices about their treatment, and are educated and supported to utilise treatments and therapies to best effect. This should take into account factors such as literacy, language, culture and IQ.
Commissioning for Best Outcomes

Population Focus

10. Supported Self-management

9. Responsive Services

What support is systematically available to improve self-management?:

- Education and training for patients
- Support materials
- Supportive staff time
- Support groups

Is adherence to treatment followed up?

Are social marketing principles applied?
Commissioning for Best Outcomes

**Population Focus**

10. Supported Self-management

9. Responsive Services

7. Expressed Demand

6. Known Population Needs

8. Equitable Resourcing

**Challenge to Providers**

5. Engaging the Public

4. Accessibility

2. Local Service Effectiveness

1. Known Intervention Efficacy

3. Cost Effectiveness

Appropriate utilisation of service by the population may require adjustments to supply.
Capacity of services needs to be commissioned to accommodate appropriate demand while meeting national standards.

Service pathways should be balanced to avoid bottlenecks and engineered to allow smooth and efficient progress.

8. Equitable Resourcing

11. Adequate Service Volumes

12. Balanced Service Portfolio

3. Cost Effectiveness
Cardiac Rehabilitation Programme

Patients remaining through the programme

Phase 1 (Hospital)  →  Phase 2  →  Phase 3  →  Phase 4 (Leisure services)

- Phase 1: 100%
- Phase 2: 80%
- Phase 3: 45%
- Phase 4: 2%
Commissioning for Best Outcomes

Population Focus

13. Networks, leadership and coordination

Challenge to Providers

6. Known Population Needs

1. Known Intervention Efficacy
Partnership, Vision and Strategy, Leadership and Engagement

Population Level Interventions

Intervention Through Services

Intervention Through Communities

Producing Percentage Change at Population Level  C. Bentley 2007
Commissioning for Best Outcomes

Population Focus

10. Supported Self-management
9. Responsive Services
7. Expressed Demand
6. Known Population Needs
8. Equitable Resourcing

Optimal Population Outcome


12. Balanced Service Portfolio

11. Adequate Service Volumes

Challenge to Providers

5. Engaging the Public
4. Accessibility
2. Local Service Effectiveness
1. Known Intervention Efficacy

3. Cost Effectiveness

6. Known Population Needs
HINST Resources
www.dh.gov.uk/hinst
Click on enhanced support programme

HINST Associates
www.hinstassociates.co.uk