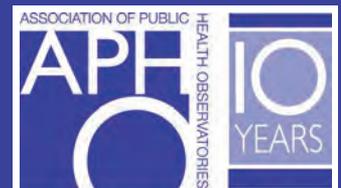




**BETTER INFORMATION
BETTER DECISIONS
BETTER HEALTH**



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SIR LIAM DONALDSON FOREWORD

Richer than ever in data

The idea to establish public health observatories was one of my first as chief medical officer. Shortly after coming into post, I was supporting the government in producing its first public health white paper, *Saving Lives, Our Healthier Nation* (2000). During the paper's development, I presented to ministers the concept of having one health observatory in each English health region. On that day, 10 years ago, an idea had come to fruition – and it survived the sometimes brutal process of sifting competing ideas for a white paper.

Today, there's much to celebrate. The observatories have achieved a great deal. They have grown in expertise and capacity. They now meet the demands of public health intelligence at national, regional and local levels. Their work has become a vital part of the country's public health infrastructure.

Public health intelligence began in this country in 1662, when John Graunt, a haberdasher by training, analysed records collected on deaths in different parts of London. William Farr began the routine collection and analysis of health data 200 years later. He had a natural passion for medical statistics and quickly saw their importance in identifying preventable causes of death. He compiled the first sets of vital statistics which, of course, have been continued ever since.

Farr, along with John Snow, was very influential in documenting the pattern of deaths from cholera. Such analysis was key to public health then and it remains so today.

When I was regional director of public health in the 1990s, we had a relatively good system of gathering public health intelligence. Many of the regions had developed similar systems at that time. However, the regional systems were very much ad hoc. Co-ordination between the regions was limited and capacity had been reduced by successive reorganisations at the regional level.

When we established public health observatories, our aim was to strengthen availability and use of information about health at the local level. I also hoped that observatories would strengthen public health input into a broad range of cross-government initiatives aimed at improving health and reducing inequalities.

Today, there are over 250 people employed in the nine English observatories. This represents a substantial body of expertise in public health intelligence. And observatories remain actively engaged in training and education. They are now very much an established part of the health landscape. They are greatly admired internationally.

I've been particularly impressed by the indications series that I commissioned on key areas of public health. These indicators provide a wealth of information that have guided action at both the local and the national level.

I've also been very impressed by the health inequalities intervention tool that allows each primary care trust or local authority to quickly identify key health areas for action by comparison with other areas in England. The programme budgeting tool is invaluable for commissioners in primary care trusts who can match expenditure with outcome data.

I am immensely proud of what the observatories have achieved over the past 10 years and I pay tribute to all who have made these achievements possible. ●

Sir Liam Donaldson is the chief medical officer



WHAT THE DIRECTORS SAY...

Leaders of the 12 public health observatories outline hopes for their regions over the coming decade

ALISON HILL

Director, South East Public Health Observatory

“Obesity and sustainability are things I want this region to have demonstrated improvement on. Obesity is a manifestation of health inequalities and it’s our lead area. This is one of the more affluent regions in England and the fact that we have health inequalities is shocking in its own right. If we are managing to tackle health inequalities in the South East it suggests to me that they’re being tackled across the whole of England. Our rates of obesity are lower than average, but with more than one in five people obese, this presents a massive public health issue for us. Some areas have to be better than the England average but it doesn’t mean you can be complacent about it.”



BOBBIE JACOBSON

Director, London Health Observatory

“My big wish for London is that we should be given a sustainable period to focus our efforts on improving health and reducing health inequalities. London has borne the brunt of frequent reorganisations on top of a greater complexity of bodies than elsewhere. Too many reorganisations make it difficult for us to deliver in partnership and to learn from history. Now that health inequalities is a mainstream part of the health agenda, I hope it stays that way. While everybody’s health in the capital has improved, right through from the poorest to the most affluent, the health gap still persists between all social groups. I would like to see a reduction in that gradient of injustice.”



BRIAN FERGUSON

Director, Yorkshire and Humber Public Health Observatory and chair of the Association of Public Health Observatories

“I’d like to see evidence-based

decision making embedded in routine practice so that it doesn’t just become an after thought – it actually drives the decisions that are made around commissioning and more generally in the NHS. I’d also like to see people using health intelligence to do the right things but also stopping doing the things we know aren’t effective, because you can use data indicators and evidence to inform those sorts of investment decisions. Finally, I think over the next few years focusing on the right measures of outcome is a real challenge for the NHS and I hope the public health observatories are going to play an important part in that.”



COLIN FISCHBACHER

Co-lead, Scottish Public Health Observatory

“We have to work within the realities that we’ll all be facing across the UK of much more severe financial pressures. We need to make clear how we add value to data. That’s always been an important objective for ScotPHO: to say this is about making information more accessible, helping people to find information, helping people to understand information and then helping them to actually use it in their daily practice to improve health. So the pressure is going to be on us to demonstrate how we add that value and how we contribute to better health in Scotland.”



DAVID MEECHAN

Director, East Midlands Public Health Observatory

“The reduction of health inequalities would be my one wish so that the gaps between the health of the best and the health of the worst are significantly narrowed, ideally got rid of altogether. The

East Midlands as a whole is very close to the national average on most health and social indicators. What that hides is that there are huge differences between subgroups of the population. I’d be particularly looking at the inequalities between the most disadvantaged and social inequalities would be my focus. For us, that means continuing to provide good public health intelligence to describe levels of inequality, and to help inform actions to reduce those inequalities.” → 2



JOHN KEMM
Director, West Midlands Public Health Observatory

“I wish we had a proper career pathway and training system for public health information analysts. People come

into analysis by all sorts of different routes and then they learn on the job. I would like recognition that public health analysis is a distinct skill set and set about building up a pool of people who really know that business. The second big area I would like to have a go at is establishing a regional information system. Chief executives have to make decisions which suit their organisation and if we set up an information system and manage it a lot better, we could save money and produce better quality information.”



JUDITH GREENACRE
Interim director, Public Health Wales Observatory

“Wales has made huge strides forward in many areas but we still have a huge legacy of ill health. I

would very much like to see us make real improvements in trying to address some of the legacy of ill health we have, particularly in the south Wales valleys. And particularly address inequalities in health, which we still have a lot of. In health intelligence terms it's putting the systems and structures in place that can help meaningfully achieve that. Our observatory is a very new one and so it's very important for me that we get really good working relationships with other people in health intelligence around Wales, nationally and internationally.”



KEVIN BALANDA
Director, Ireland and Northern Ireland's Population Health Observatory

“The Irish observatory covers the island of Ireland, which includes Northern Ireland and the Republic of Ireland. In the last 10 years huge progress has been made in the health intelligence area but this follows a period of significant rundown in services and information systems, particularly in the Republic of Ireland. My one wish is that public health and the health intelligence community doesn't lose its nerve during what will be at least for the next five years, possibly for the next 10 years, a continuing difficult situation for us. That we hold on to what's important for public health and we hold on to what contributions health intelligence can make to that.”



JOHN WILKINSON
Director, North East Public Health Observatory

“The North East has among the worst health in the country. What isn't helpful for our PCT chief executives is just to keep repeating that message because we know it. What they wanted, and what we did, was to develop a set of indicators that would help them monitor the process of achieving the targets in our regional strategy, *Better Health, Fairer Health*. That's around 10 key areas of different aspects of health improvement. So it's concentrating very much on the processes involved in achieving better health in the North East. These are indicators and measures that are susceptible to change, that the chief executive can do something about. That's our big push.”



JULIAN FLOWERS
Director, Eastern Region Public Health Observatory

“In terms of a region we're pretty healthy. What we hope is that if this is the healthier part of the country it should be much easier in the future to make international and European

comparisons and find benchmarks outside the UK of similar regions. We need that kind of stimulus to keep improving health at a regional level. On the general information landscape, NHS data needs to be much more accessible to people and it needs to be built up from the smallest unit to the largest unit because that's one way of coping with organisational change. You have to have smaller level data for lots of things so you can quickly regenerate to the new organisational boundaries.”



JULIA VERNE
Director, South West Public Health Observatory

“We have the oldest region in the country in terms of percentage of older adults either over the age of 65 or over the age of 85 and if you project that out to 2020 or 2030, the proportion of the

population who will be elderly will expand very significantly. In our region I would like to see services planned firstly to promote the health of older people, secondly to provide services to meet their needs in an optimal way and finally to ensure that the end of life strategy is implemented universally across the region. I'm absolutely determined that more people should be able to achieve 'a good death'”



MARK BELLIS
Director, North West Public Health Observatory

“We've done a lot of work on trying to inform PCTs' and local authorities' policy on alcohol. We're expanding that work to provide more understanding around alcohol so that people better

understand the harms, better understand the pressures on health services and also understand where the interventions are going to be most effective. We are also moving towards practice profiles so that we're providing the right sorts of intelligence for general practices to understand their populations and make the right decisions about interventions, preventions and healthcare. We're now looking at individual modelling to identify interventions to prevent certain groups of individuals from being high resource intensive users in three, five or 10 years' time.” ●

TOO MUCH TO HANDLE?

The flood of new health data needs to be used, shared and managed more intelligently – and PHOs in particular need to make the information easier to interpret

The information age has ushered in a speed of data generation that risks outstripping the capacity of policy makers and practitioners to manage and use it.

“Going forward, providers of information need to work smarter and more closely together to avoid duplication,” says Julian Flowers, director of Eastern Region Public Health Observatory. “That includes PHOs, the Office for National Statistics, the NHS Information Centre, the Health Protection Agency, the Department of Health and private sector organisations.”

He adds: “Rather than different organisations crunching the same data, fewer people should produce large datasets that are used by everyone. Public websites could be linked so that a search on one will access information on all of them. And the information needs to be understood, so that decision makers can make best use of it.”

For PHOs that means working more closely with regional and local organisations to help people use and interpret the information more easily.

“Information also needs to be more accessible to the public so that people can make more proactive decisions about their own health,” adds Gabriel Scally, regional director of public health at NHS South West. “That means going beyond traditional modes of providing strategic health information.”

Today there is a tension between having clean but out-of-date data versus data that is more recent but less clean. People in the field generally want the latter but it requires more effort to understand.

Dr Flowers says: “There’s got to be a reasonable compromise in how quickly you want to know something against whether it really tells you anything useful.”

But he argues that in 10 years, data should be available instantaneously because databases will be continually updated. Efforts are needed to make sure that such real-time data is good quality. System providers, data collectors

and data inputters will need to build in validation at the point of entry.

There are still substantial data gaps for major areas of health and ill health. While the UK’s cancer registries are exceptionally good there are few other examples.

“Population-based registers of strokes, coronary heart disease and congenital abnormalities are needed,” says Dr Scally.

And he argues that public health information from different sectors needs to be better connected.

Dr Scally says: “One of the ways forward at a local level will be better integration of the strategic information systems between local government and primary care trusts and other parts of the NHS to enable us to address some of the big public health programmes, whether they are about obesity, tobacco or alcohol.”

But public health professionals have been poor at articulating that it is in the public interest for information to be shared. PHOs need access to general practice data, for example, which is difficult because of confidentiality issues. However, information

HEALTH INTELLIGENCE CHALLENGES OF THE DECADE

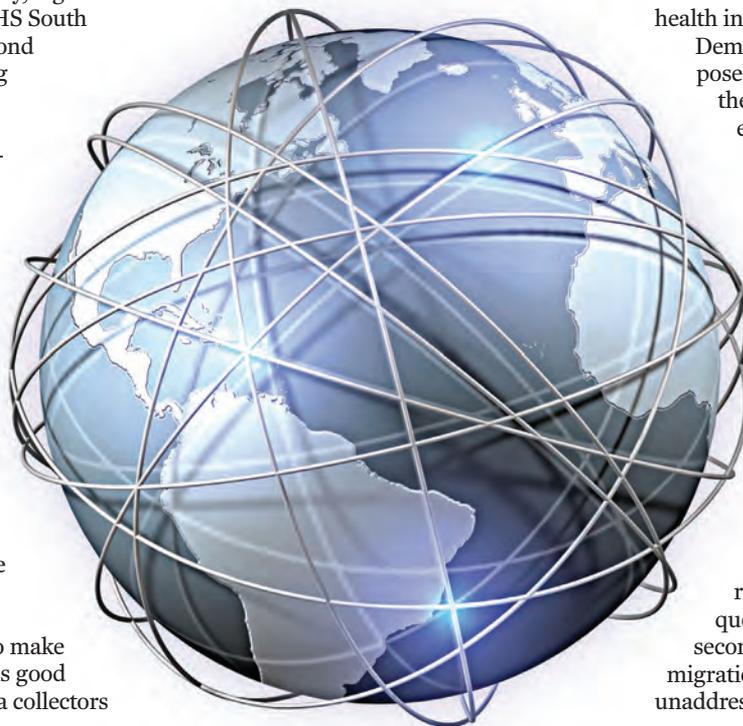
- Smarter management of multiple data sources
- Helping local users understand and use health intelligence in decision making
- Intelligible health information for informed citizens
- A more intelligent approach to real time data
- Filling persistent gaps: new health and quality measures and reliable population-based registers
- Better sharing of health and local authority data
- A better grip on measuring the whole pathway of intervention

that sits in silos and is difficult to link up makes it difficult for a cash-strapped NHS to understand where money is being spent in improving health.

There is also a need to improve measurement of pathways of care. Good measurement exists in screening programmes, but the same is not true for chronic disease management or public health interventions such as smoking.

Demographic change and migration will pose major information challenges for the new decade. Healthy life expectancy and disability-free life expectancy measures will be particularly important for monitoring the effect of people living longer on the burden of disease and disability in the population. Without good information on population migration, ethnicity and other dimensions of diversity, the value of many of these measures will be limited.

The 2011 census is being developed to improve understanding of migration and the effects of globalisation. It will cover people living in the UK for relatively short periods, and will ask questions about citizenship and second homes. But measurement of migration between censuses remains an unaddressed challenge. ●



A GOOD CONNECTION

Public health observatories optimise their effectiveness by sharing knowledge and expertise. We look at how they do it

The Association of Public Health Observatories was set up to make an effective group of public health observatories even more effective by providing the infrastructure to aid collaboration.

APHO has helped to embed a common model for PHOs, which all provide information to their local communities and regions and help with interpreting data for decision making.

Twelve PHOs cover England's nine regions, Scotland, Wales and the island of Ireland. The English PHOs have taken on lead areas – Yorkshire and Humber, for example, leads on diabetes – and developed expertise and tools which are then shared with the rest of the network, and in some cases used to inform national policy.

APHO facilitates the sharing of expertise between PHOs, says John Newton, regional director of public health (RDPH) at NHS South Central, and lead RDPH for APHO. "If I have any questions, I can go to APHO and know that they will pass that on to the person with the most experience to deal with the issue."

Brian Ferguson, director of the Yorkshire and Humber PHO and chair of APHO, says PHOs' strong regional networks are strengthened by the fact that PHOs have existed in the same form for 10 years – a long lifespan for the NHS. "We've got quite a strong corporate memory of local and regional organisations," he says.

Other organisations are involved in the health intelligence field, including the NHS Information Centre at national level in England, local health intelligence units in PCTs and equivalent organisations in the other countries. All have an important function to fulfil but PHOs fill the gap

around regional benchmarking and regional networks, which cover not just the NHS but local and regional government as well.

The health profiles, created by PHOs, for example, are used not just by PCTs and health boards in their planning and needs assessments but by local authorities and regional government for local area agreements and 'total place' activity.

The range of organisations that use the work of PHOs makes them a unique provider of public health intelligence.

PHOs also have strong links with academic institutions and are a conduit between research and practice. That particularly plays out through the lead areas. Yorkshire and Humber PHO collaborates with academic experts on its lead area of diabetes. Its work with the paediatric diabetes register in Leeds on prevalence modelling strengthens the robustness of the work.

In today's economic climate the PHO model makes good sense, says Professor Ferguson. It enables sharing of good practice and avoids duplication. The lead areas in England work to the same overall agenda from the Department of Health and

In today's economic climate the public health observatory model makes good sense. It enables sharing of good practice and avoids duplication

are "an efficient way for us to manage our business", he says.

Ten quality observatories are being established and are likely to copy the PHO model of lead areas. And the cancer registries have followed a similar model, with lead areas for the main cancer sites.

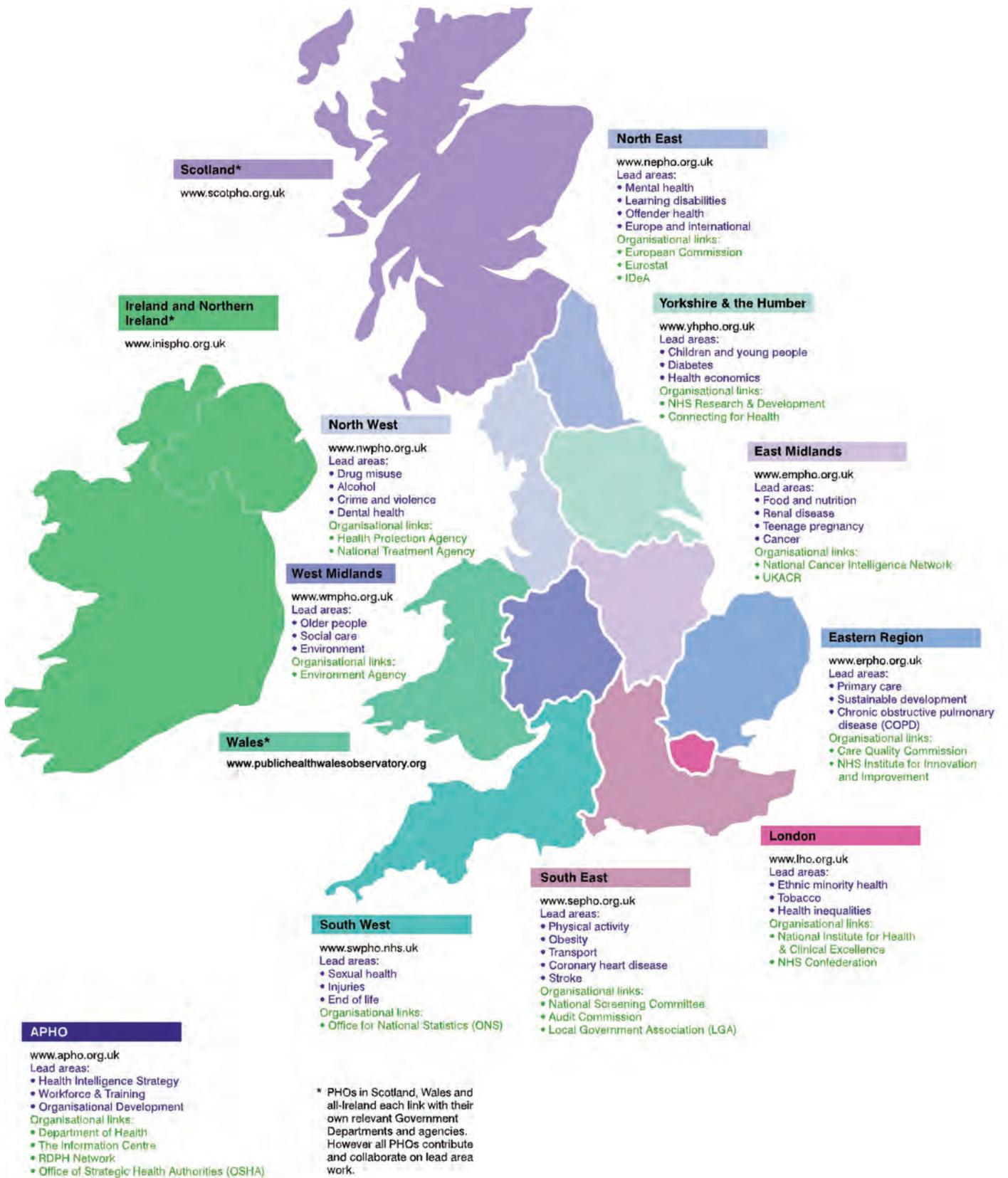
PHOs work closely with cancer registries and share their complementary skills and expertise. Both are vital for monitoring performance on a range of areas, from lifestyle to cancer survival rates, says Mike Richards, national cancer director at the DH. He adds: "It's not just a question of monitoring; it's also about planning for the future."

"The diversity of countries and disciplines within APHO is a huge strength," says Kevin Balanda, director of Ireland and Northern Ireland's Population Health Observatory (INIsPHO).

Being part of APHO has been invaluable for the all-Ireland PHO, which is less advanced in terms of its information systems and how they are used. "It has borrowed and adapted work from the other PHOs and contacted others in the network for ideas," says Professor Balanda. ●

PHOS – AN EFFICIENT NETWORK

- High quality intelligence – interpretation and contextualisation
- Value for money service to NHS and partners
- Closeness to local and regional stakeholders
- Robust and flexible infrastructure
- Technical and methodological innovation
- Responsive, bespoke enquiry service
- Lead area knowledge and expertise
- Critical mass of data and analytic skill
- Cross-network communications



THE RIGHT TOOLS FOR THE JOB

For the past 10 years, public health observatories have been supporting local, regional and national decision makers. Here, we look at some of the most important advances made by the PHOs

PRODUCING HEALTH PROFILES THAT HELP TO SET LOCAL PRIORITIES

Improving health and reducing inequalities relies on the NHS working with local government and regional bodies. Public health observatories (PHOs) provide the health intelligence needed to develop a local picture and then decide on appropriate action.

Health profiles are one key example. First published in 2006, they are produced each year by the Association of Public Health Observatories for every local authority in England (similar profiles are produced in Scotland and Wales). The four-page reports along with an interactive web-based tool include key messages for that area, changes over time in health inequalities, and performance on 32 indicators compared to the rest of England.

The indicators reflect the issues affecting public health, such as poverty, the environment, violent crime, children's health, lifestyles, morbidity and mortality. They underpin national policy areas and are tied into local policy.

"The purpose is to provide consistent and reliable, robust, validated data on a range of indicators that reflect the health of the population," says Alison Hill, director of the South East PHO, which leads on health profiles.

Local authorities, PCTs, community groups and local partnerships use the profiles to help them prioritise health needs and plan interventions.

NHS Nottingham City uses health profiles to inform the health needs assessment in its five-year strategy and to compare progress over time. It also uses them to examine the PCT's position on the wider determinants of health and how that should affect priorities for the local strategic partnership (LSP).

Chris Packham, director of public health, and a member of the health profiles programme board, says health profiles are presented in a way that makes them easily accessible for LSP members. And they add

value because they are "objective, independent of [the] existing local NHS, obviously cross agency and take in upstream wider determinants of health".

Local councillors are exposed to the health profiles at the Improvement and Development Agency (IDeA) Leadership Academies. "A quick look tells them the state of health in their local area and helps guide priorities," says Liam Hughes, national adviser for healthy communities at IDeA.

He adds: "A lot of members like to know how far off the activity of the local NHS is from what needs to be done and also their own role in it. I think overview and scrutiny people, particularly, see the value of it."

Top management teams of local councils also find health profiles useful when thinking about local area agreements.

Local authorities and PCTs are also using the North West PHO's alcohol profiles, which provide data at local authority and PCT level about alcohol use and alcohol-related harms. Organisations can look at the pressure on hospitals and which types of conditions are more or less related to alcohol when people present at hospital.

The profiles incorporate wider data related to alcohol, such as employment data (long-term ill health related to alcohol) and criminal justice data. It means that local organisations working together on alcohol, including local authorities, PCTs and the police, have access to a joint system of intelligence for making decisions about how to tackle the problem.

Mark Bellis, director of the North West PHO, says: "[They] provide an interagency overview of the pressures alcohol is causing on health and on services in an area, a guide about where to provide interventions and how those interventions might turn into health benefits and cost savings." ●

Health profiles

→ www.healthprofiles.info

Alcohol profiles

→ www.nwph.net/alcohol/lape

WHAT'S NEXT FOR HEALTH PROFILES?

- Creating profiles for communities within local authorities to help local people with lobbying and bidding for money
- Improving skills so people can interpret the data and make better use of it.
- Integrating tools produced by PHOs (such as health/alcohol profiles and health inequalities toolkits) to make them easier to use.

THEMED OBSERVATORIES

Themed observatories are topic-based observatories run by PHOs.

The Injury Observatory for Britain and Ireland (IOBI) – set up by the South West PHO and partners – supports injury prevention practitioners by providing a one-stop shop of tools and information on one website.

→ www.injuryobservatory.net

The Child and Maternal Health Observatory (ChiMat) is part of the Yorkshire and Humber PHO and provides data, intelligence and resources on child and maternal health.

→ www.chimat.org.uk

The National Obesity Observatory (NOO) was established by the Department of Health (commissioned from the South East PHO) to provide a single point of contact for wide-ranging authoritative information on data and evidence related to obesity, overweight, underweight and their determinants.

→ www.noo.org.uk

Most recently, the North East PHO, in collaboration with the Centre for Disability Research at Lancaster University, has won a Department of Health commission to provide an observatory monitoring health and healthcare for people with learning disabilities.

HELPING TO TACKLE HEALTH INEQUALITIES

Describing the size and extent of health inequalities and monitoring changes over time has been an important task for PHOs. The London Health Observatory (LHO), which leads on health inequalities, has generated predictions on whether London's partnerships would meet the national public service agreement target to reduce health inequalities by 10 per cent by 2010 – as measured by infant mortality and life expectancy at birth.

But LHO has gone a step further and produced a series of national health inequalities intervention tools to help local partnerships understand the underlying causes of the gaps in life expectancy both within and between local authorities.

The tools can also be used to model the impact of five cost-effective, evidence-based interventions: smoking cessation, statin prescribing, antihypertensive prescribing, controlling high blood sugar in people with diabetes, and interventions to reduce infant mortality.

For example, local areas can see how much the gap would close by increasing the number of successful smoking quitters by a certain amount.

“The advantage of the tool is that it allows you to plan what you think is appropriate locally,” says Bobbie Jacobson, LHO director and vice-chair of APHO. “It’s the first time that local organisations have had this information based on evidence that will show them in a simple way what impact they could have if they were really successful in their local efforts.”

A new infant mortality tool has been

designed for SHAs and for PCTs with 20 or more infant deaths in any one year. It shows trends in death rates and the contribution of six modifiable factors: teenage pregnancy, breastfeeding, poverty, obesity, smoking in pregnancy and sudden unexplained death in infancy. At SHA level, the tool can model what effect modifying any of the six factors would have on infant mortality.

Unlike the other tools the infant mortality tool focuses on modifiable factors – such as poverty – rather than specific interventions. In London, for example, it shows poverty is the strongest driver of inequality in infant death. Dr Jacobson says: “It provides a focus for which priorities we should tackle first.”

The tools have been developed on behalf of APHO and in partnership with the Department of Health. They are primarily aimed at spearhead PCTs and local authorities, which are areas with the worst health, mortality and deprivation indicators.

Eastern region does not have spearhead areas, so when health inequalities became a mandatory indicator in local area agreements, the PHO worked with the government office and PCTs to develop inequalities profiles for the region.

The profiles pool three years of data to show overall mortality and premature

deaths from particular causes such as heart disease. Comparisons can be made within and between PCTs. Julian Flowers, director of Eastern Region PHO, says the profiles have fed into PCT commissioning frameworks, local area agreements and joint strategic needs assessments.

Elected members see the LHO health inequalities intervention tools at work during the IDEa Leadership Academies. It is a powerful way of illustrating what needs to be done in a local area to reduce the gap.

Dolors Medina, research and information officer at Wolverhampton City Council, has used the life expectancy spearhead tool to identify the main causes of mortality that contribute to the gap between Wolverhampton and England.

She says: “The tool is useful as an overview of the causes and major impacts of mortality that may shed a light on health inequalities in a particular area.”

Milton Keynes has a high infant mortality in the routine and manual group. Sanhita Chakrabarti, specialist registrar in public health at Milton Keynes PCT, says: “The information in the infant mortality tool on the risk factors that contribute to high infant death will be valuable for local planning and local projections.”

With tools now available that address life expectancy and infant mortality, Dr Chakrabarti says there is a good opportunity for local areas to address both aspects of the national inequalities target. ● Inequalities intervention tools
➔ www.lho.org.uk/LHO_Topics/Analytic_Tools/HealthInequalitiesTool.aspx
East of England inequalities profiles
➔ www.erpho.org.uk/viewResource.aspx?id=20529

WHAT'S NEEDED IN FUTURE FOR HEALTH INEQUALITIES

- The cost and short term impact of implementing interventions to reduce inequalities
- The effect of a broader spectrum of interventions on reducing health inequalities, including reducing alcohol misuse

Differences in life expectancy within a small area in London

Travelling east from Westminster, every two tube stops represent over one year of life expectancy lost – data revised to 2003-07

Male life expectancy
78.9 (CI 75.7-82.1)

Female life expectancy
85.5 (CI 83.4-87.6)

Westminster

Waterloo

Southwark

London Bridge

Bermondsey

Canada Water

Canary Wharf

Canning Town

North Greenwich

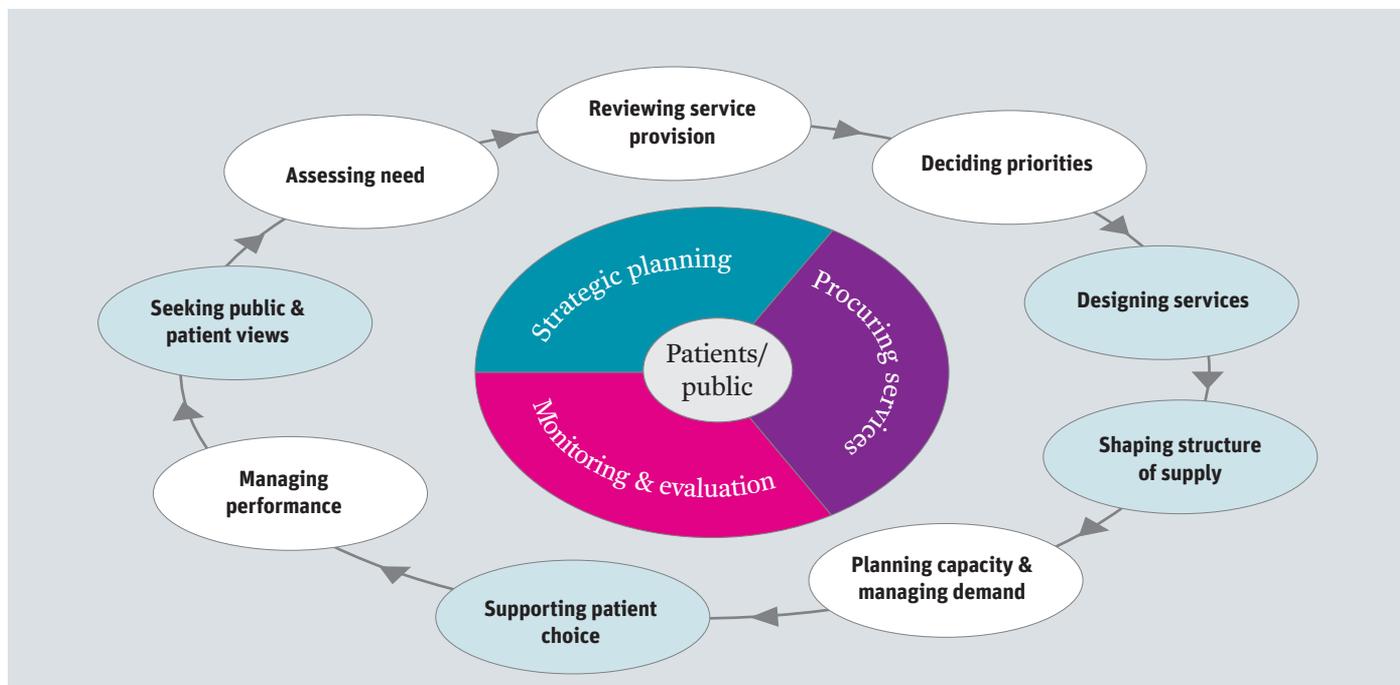
Male life expectancy
73.8 (CI 72.1-75.5)

Female life expectancy
82.8 (CI 80.5-85.2)

London Underground Jubilee Line

Electoral wards just a few miles apart geographically have life expectancy spans varying by years. For instance, there are eight stops between Westminster and Canning Town on the Jubilee Line – so as one travels east, every two stops, on average, mark over a year of shortened lifespan.

Source: Analysis by London Health Observatory of ONS and GLA data for 2003-07. Diagram produced by Department of Health



PHOs contribute to many aspects of the commissioning cycle, particularly needs assessment and the use of evidence to support decisions on commissioning and disinvestment.

When it comes to assessing need, PHOs have developed evidence-based tools to estimate the population prevalence of conditions including diabetes, chronic obstructive pulmonary disease (COPD) and cardiovascular disease at general practice and PCT population levels. On a more strategic level, PHOs help their regions with joint strategic needs assessment.

PHOs use hospital episode statistics to help understand and benchmark the variations and inequalities in activity and cost across providers. It's a way of reviewing service provision. "If you can get clinicians

together to look at appropriate levels of activity then there are potential cost savings in the system," says Brian Ferguson, director of Yorkshire and Humber PHO.

Deciding priorities is a big job for PCTs, which have been asking PHOs to provide them with the evidence they need to make commissioning and decommissioning decisions. Yorkshire and Humber PHO's spend and outcome tool (SPOT) is also helping with prioritisation of investment and disinvestment (see box).

Health inequalities is one of the mandatory indicators for PCTs in the World Class Commissioning Assurance Framework, but the indicator used in the first year was not up to scratch. The DH asked APHO to come up with an improved model and together the PHOs in London and the East Midlands rapidly developed a more robust measure that reflected the whole gradient of inequality within each PCT/local authority.

Previous measurements of inequalities have concentrated on the gap between the most deprived quintile of the population and the rest of the population. "It is widely acknowledged now that inequality is not about a few people within any area that are badly off; it's a gradient," says Paul Fryers, deputy director of East Midlands PHO.

The new measure gives the gap in life expectancy between the worst and best in a PCT. It is calculated using five years' worth of data and fitting a slope across the whole of the PCT. The difference varies from two years in some PCTs to up to 14 years in others.

NHS Manchester has used the indicator to set a target for reducing inequalities in life expectancy in the city by 1 per cent each year as part of the WCC assurance process. "The indicator has also been a crucial element of the work we have been doing to benchmark Manchester against other PCTs in terms of a range of key health outcomes," says Neil

WHAT NEXT FOR SUPPORTING WORLD CLASS COMMISSIONING?

- Systematically supporting evidence-based decisions on disinvestment
- Achieving appropriate levels of variation in activity and cost across providers
- Working with clinicians to change patterns of spend to emphasise prevention and primary care
- Establishing strong links between PHOs and the new Darzi quality observatories

Bendel, head of health intelligence at NHS Manchester.

The PCT's analysis of trends in the indicator has fed into the development of local joint strategic needs assessments, which are designed to inform commissioning decisions.

The North East PHO has been commissioned by the DH to lead the transfer of the management, development and maintenance of SHAPE from the DH to the NHS. SHAPE (Strategic Health Asset Planning and Evaluation) is a web-enabled, evidence-based toolkit to inform strategic planning of services and physical assets.

Using geographic information systems, SHAPE integrates clinical, estates and demographic data into one application. SHAPE is a national tool and is configured to English SHA and PCT boundaries and seeks to facilitate scenario planning and option appraisal. It can support various policy agendas including: QIPP, Transforming Community Services and World Class Commissioning. It is free to all NHS professionals. ●

Health inequalities indicator
 → www.apho.org.uk/resource/view.aspx?RID=75050
 SHAPE toolkit
 → shape.dh.gov.uk

SPOT TOOL

Yorkshire and Humber PHO developed the Spend and Outcome Tool (SPOT) and a factsheet for every PCT in England to provide an overview of where money is being spent and what outcomes are being achieved across all programme budgets.

PCTs can compare their spend and outcome across the 23 programme budget categories with other PCTs and find out where they have lower spend and better outcome; lower spend and worse outcome; higher spend and worse outcome; and higher spend and better outcome.

NHS Doncaster finds the tool a useful visual aid to benchmark itself against other PCTs in the SHA and against PCTs with similar socioeconomic factors.

"It's a very easy way to start to prioritise where your programmes have got high comparative spend and poor comparative outcomes," says Martha Mayhew, NHS Doncaster's assistant director of service improvement for public health.

→ www.yhpho.org.uk

BUILDING THE KNOWLEDGE AND SKILLS OF THE WORKFORCE

Specialist skills training

Public health intelligence training was fairly ad hoc until the national health intelligence strategy, *Informing Healthier Choices*, put a focus on workforce development. PHOs have since led on developing training and workforce skills across their regions.

The South West and East Midlands PHOs developed a five-day introduction to public health intelligence course aimed at analysts from local authorities, PCTs and police forces, which has been rolled out to other PHOs.

Claire Tiffany, public health analyst (alcohol) at the North West PHO, took the course in 2004. "The course was unique in covering both public health issues and analytical techniques," she says. "It helped me find an area of health analysis I was interested in and to focus my career."

Laura Neads, a researcher in the Southern Regional Core Team at the Audit Commission, completed the course in March 2010. She says: "It's given me the confidence to look at data and interpret it in the right way."

PHOs also offer placement training. In the South West, trainee analysts spend nine months at the PHO and nine months in a PCT. "The aim is to fill the gap in the public health intelligence workforce," says Paul Brown, deputy director of the South West PHO. West Midlands PHO provides training on health impact assessment (HIA), which teaches how to identify the health implications of public decisions, such as creating a new train line. Knowledge in the field is collected at the HIA gateway website.

WHAT NEXT FOR BUILDING WORKFORCE KNOWLEDGE AND CAPACITY?

- Developing practitioner-level accreditation for public health intelligence analysts who meet defined competencies
- Providing training for more experienced analysts on how to use strategic information
- Strengthening public health intelligence networks within regions

A knowledge network

Public health analysts share methodologies, techniques and best practice through regional networks which include local authorities, PCTs, the Environment Agency and Health Protection Agency.

The APHO technical group, led by the technical leads from each PHO, helps to steer all the observatories towards the best methods.

APHO technical adviser Paul Fryers says: "It adds to our wider knowledge by producing briefings on challenging methods and techniques, such as how to measure smoking at a local level."

PHO websites are also linked, so that a search on one issue will bring up resources from across all the PHOs, while access to the evidence base for public health interventions is being improved by the National Library for Public Health, led by North East PHO. ● Health impact assessment gateway → www.hiagateway.org.uk
National Library for Public Health → www.library.nhs.uk/publichealth

International collaboration

World class comparisons in health are being made through the I2SARE (Indicateurs Santé Régionaux Européenne) project which aims to produce health profiles for every region in Europe. It will also develop a classification system to identify similar regions across Europe.

The idea that such data was needed originated in France, which has led a number of ISARE projects. "One of the problems with international data is that most of the comparisons are done at country level," says John Wilkinson, director of the North East PHO.

"It's very useful to make comparisons between your region and a region from another country because the health system is not exactly the same [and] the way the people look at the problem is not always the same," says Bernard Ledésert, director of the Observatoire Régional de la Santé du Languedoc-Roussillon in Montpellier, France.

Teenage pregnancy is an issue in some English regions, while in France some regions have a problem with unwanted pregnancy in women of all ages. Dr Ledésert says solutions developed in England can be useful in France.

Equally, mortality due to cardiovascular disease might be good in one region of Germany compared to the rest of the country, but poor compared to a French region across the border.

The UK regional model of observatories is based on the French network, and another goal of I2SARE is to build a network of observatories across Europe. The London Health Observatory has produced the guidance *Establishing a Regional PHO*.

The UK's newest PHO was set up in Wales in October, helped by APHO and individual PHOs in England. APHO's advice on setting up a quality assurance system was invaluable. Judith Greenacre, interim director in Wales, says: "It's saved us hours and hours by getting practical experience and giving us a jump start." European data

→ www.nepho.org.uk/topics/EuropeanData
Public Health Wales Observatory
→ www.wales.nhs.uk/sitesplus/888/page/46586

Establishing a Regional PHO is available at
→ www.lho.org.uk

WHAT NEXT FOR INTERNATIONAL WORK?

- Working more with the World Health Organisation to support the development of new observatories and methodologies.
- Establishing an enduring network of regional PHOs across Europe.



PUBLIC HEALTH OBSERVATORIES

Celebrating a decade of public health intelligence



Public health observatories provide services at local, regional and national level across the UK and Ireland.

PHOs provide a range of health intelligence functions including:

- Strategic leadership for public health intelligence.
- Monitoring of health trends.
- Decision support for World Class Commissioning.
- Expert analysis and interpretation of Hospital Episode Statistics data.
- Training and capacity building programmes.
- Facilitating local and national networks for sharing knowledge and skills.
- Developing innovative tools to plan, forecast and monitor health outcomes and interventions.
- Economic modelling and costing of services.
- Regional hubs for co-ordinating and delivering health intelligence.
- Supporting and advising clinical networks and quality observatories.
- Delivering and supporting national priorities via lead areas and themed observatories.
- Innovative presentation of information for a variety of audiences.
- Building and signposting health knowledge for decision makers.

www.apho.org.uk

PHOs' key roles are:

- Promoting and delivering health intelligence to decision makers.
- Ensuring that high quality, relevant population health information is available to stakeholders at local, regional and national levels.
- Developing a skilled health intelligence workforce.

