Introduction to Population Health – Healthcare Public Health

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Aim of session

- Understand what is public health and how it relates to clinical practice.
- Gain an understanding of how the health system is organised.
- Appreciate the value of having a broad whole-systems view of health and disease.
Mr Bronchitis

- 66 year old man
- Chronic Obstructive Pulmonary Disease (COPD) for some years now
- Worsening breathlessness, fever, cough, sputum
- Admitted to hospital

Streptococcus pneumoniae on sputum culture

Pneumonia on chest x-ray
What are you going to do for him?

Bronchodilators?

Antibiotics? Steroids?
But …

Smokes 40cpd for 40+ years

His friends & family all smoke

Lives in rundown council flat

Former coal miner

Hard to get to see GP
Ok, let’s take a look at how the health service works…
Dr General Practice

- Works long days
- There’s lots and lots of paperwork!
- Patients keep complaining of not being able to get an appointment to see him
- Patients are getting more complicated as they have multiple health problems

The work … it’s never ending!
We’ve got an ageing population…
Dr Med Registrar

I wish the GPs would stop sending us rubbish!

Works hard on the medical admissions unit
Long days
Lots of complicated patients
Not familiar with either the patients or consultants
Trying hard to keep up to date
Doing the right thing: Evidence based practice

National Institute for Health and Clinical Excellence
But health services are also very complicated…
Ideal Situation

1. General Practice
2. Inpatient Surgical ward
3. Surgical treatment
Reality?
The ‘old’ system

- In the early 2000s
The “new” system

The marketisation of the health service has created an epidemic of *Not-me-itis*.
How am I going to pay for this?!

How do I get the best for patients?
And there’s not much money around…

Unprecedented growth
2001/02 – 2010/11

Unprecedented constraint
2011/12 – 2013/14

The gap
£105bn

Real terms resources (2009/10)

Zero real-terms growth

Time
Lots of competing voices!
Dr Public Health

• Worried about worsening inequalities for the poor, the voiceless and the marginalised

• Trying to keep the peace and balance views between the doctors, managers, media, government, etc…
“Individual” vs. “Population”

It’s **MY** right to health care

Greatest benefit for the greatest number!
Speaker: Doctors
I want to improve the care I offer my patients
We should ask local families about the medical care that they really need
Let’s reduce waiting times for the sickest patients

Speaker: Public Health
I want to improve the health and wellbeing of my population
We should use both quantitative and qualitative data to assess health needs and prioritise them
Let’s work with many partners to remove or reduce the multiple causes of ill health and health inequalities

Speaker: Manager
I want to improve service prioritisation in our locality
We should perform a needs-based assessment of our provision
Let’s redesign our patient pathways and remove our bottlenecks
90:10 Paradox

Most health activity occurs outside hospitals, but most of our health resources are concentrated in hospitals!
Level 3: Highly complex patient
Requires case management

Level 2: High risk disease
Disease specific management

Level 3: 70-80% of LTC population
Self care support/management

Hospital consultant

GP

Community Matron

DSNs
• The health system can worsen and even create inequalities!

(Recall “inverse care law”?)

• Some patients get good care,

Others get substandard care,

And a few get no care!
Variations in health service delivery

Proportion of patients expected to have COPD on GP registers

Data
Average
2SD limits
3SD limits

Proportion of COPD patients (%)

0 10 20 30 40 50 60 70

Total number of adult patients >18y

0 50 100 150 200 250 300 350 400 450
In Nottingham City, only **43%** of adults with COPD have been diagnosed and registered.

*(Based on APHO modelled estimates for COPD & QOF, 2010-2011)*
So our health services aren’t perfect…

- It’s confusing and complicated
- It’s inefficient
- It’s under high demand
- It’s short of cash
- It’s unfairly distributed
- It’s not always safe
Why should I be bothered?

• As doctors, we only see the tip of the iceberg!
• Every clinical decision has consequences and costs attached …
• We can make a difference
“Every doctor is a public health doctor”

Collective responsibility for health, its protection and disease prevention
Public Health

• Covers issues right across medicine, the local community, government policy, international issues, and the wider determinants of health.

• “Population perspective”

• Partnerships with all those who contribute to the health of the population
Key skills

- The BIG picture
- Making sense of the data/evidence
- Translating the evidence into action
- Championing health
- Working with others, through others, for others
What do doctors do?

• Gather information (history and examination)

• Relate to
  • Anatomy
  • Physiology
  • Pathology

• Make diagnosis

• Treat
What if your “patient” … … is a population?

- Gather information (data, studies and surveys)
- Relate it to the
  - Anatomy of a population - **Demography**
  - Physiology of a population - **Sociology**
  - Pathology of a population - **Epidemiology**
- Diagnose and treat
  - Policies and strategic plans
Seeing Individual vs. Population needs
Seeing the whole picture

Exacerbation of LTC requiring hospitalisation

Crisis management of severe exacerbations

Step up/Step down care

Early detection and treatment of acute exacerbation

Structured Patient Education

Specialist support service

LTC Monitoring

Patient journey time line

Early Diagnosis

LTC Assessment and Intervention

Supported self care Social Care

Health Promotion and Prevention Options
You will be a doctor in 5 years.

What kind of doctor will you be?
Public health in the rest of the course

Phase 1

- A population approach to Chest pain, Jaundice, Meningitis, and more...
- Skills e.g. critical appraisal, medical statistics
- Sociology & Behavioural Sciences

Phase 2 & 4

- Optional SSCs

Integrated throughout with clinical teaching
Public health in the rest of the course

**Phase 3**

- Global Health lecture series
- Community and Public Health Module
  - Epidemiology, Screening, Audits, Migrant Health, Communicable Disease Control, etc…
  - Masterclass ILAs in Global Health, Health in Developing Countries, Sustainable Healthcare, etc…
- Electives!

Integrated throughout with clinical teaching
Public health in the rest of the course

After 3rd year, option to study for a

*Masters in Public Health (MPH)* or

*Masters in Public Health (International Development)*

Integrated throughout with clinical teaching
MSc Clinical Research

Masters Programmes

Master of Public Health (MPH)

MPH (Health Services Research)

MPH (Management and Leadership)

EuroPubHealth (European MPH Programme)

Health Economics & Decision Modelling (New 2009)

Health and Social Care Research

MSc International Health Technology Assessment

Advanced Emergency Care

MSc Social Science and Health

Economics and Health Economics

Health Informatics

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Stay broad minded

• Some questions to ask in your training
  • How could this be prevented?
  • Is the treatment effective/proven?
  • Is it safe?
  • Is it cost-effective?
  • Who isn’t getting the service?
Take home messages

• Take a broad view
• Keep asking questions
• Enjoy!