



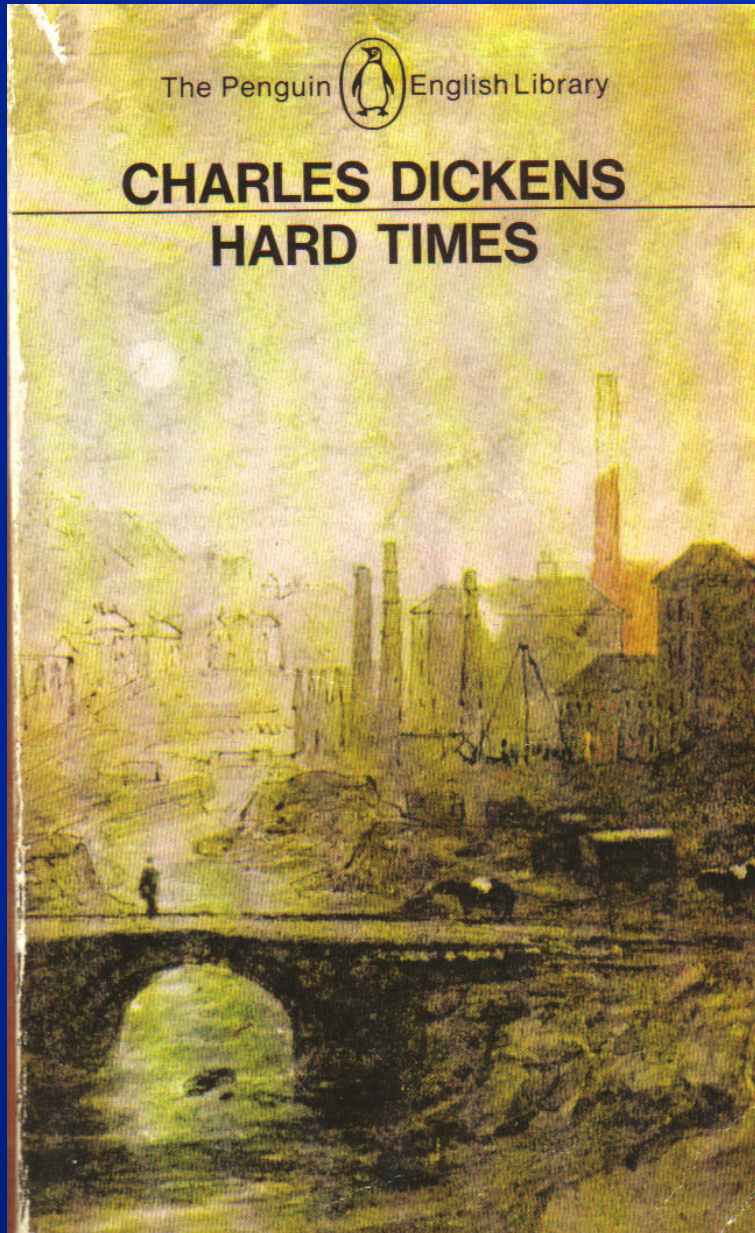
The Need & Value of the Evidence Base

UWIC

What do we understand
by the term 'evidence
base'?

The Penguin  English Library

CHARLES DICKENS
HARD TIMES



"Now, what I want is, Facts. Teach these boys and girls nothing but Facts. Facts alone are wanted in life. Plant nothing else, and root out everything else. You can only form the minds of reasoning animals upon Facts: nothing else will ever be of any service to them."

Evidence based medicine is the conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients. The practice of EBM means integrating individual clinical expertise with the best available external clinical evidence from systematic research.

Why do we need an evidence base in Environmental Health?

- We are living in a post-Hampton environment
- There is a need to be able to measure the impact of interventions
- We are working alongside those who have a culture of evidence based practice
- The increased use of the precautionary principle in shaping policy

- Einstein's famous statement:
"Only the theory decides what one can observe."
- So, build a better body of theory - 'pick up the other end of the stick' - Thomas Kuhn (1979)

- Stop thinking about theory as distinct from practice - each informs the other
- Reflection offers a possible route to developing an appropriate evidence base

- *However, caveat emptor*
- The terminology of 'evidence' rather than knowledge reflects medical scientific discourse rather than that of social science or indeed 'care'

Pilgrim & May 1998 cited in *The Theory-Practice Relationship in Interprofessional Education*

The effects of housing on health are difficult to study. Common sense tells us that the relation exists, but it is usually impossible to prove it scientifically

Lowry 1991, p. 13

It is a serious mistake to get drawn into pseudo-scientific arguments about whether there is a causal connection between bad health and poor housing ... We don't need to prove medically that dampness causes disease, it is enough that it makes us feel rotten.

Important examples of applications of evidence in public and environmental health

- Cholera: Snow and the Broad Street pump
- Epidemic prevalence and poor housing
- Occupational exposure to asbestos - Doll 1955
- Exercise at work and heart attack - Morris et al 1953
- Smoking and lung cancer - Doll and Hill 1952

How can we best develop
an evidence base in
Environmental Health?

The evidence base approach within medicine:

- Careful and detailed observation
- The experimental method
- The controlled trial
- The accumulation of evidence

Building the evidence base – the approach of medicine:

- Aggregation of evidence rather than generalising from one particular study
- Synthesising the evidence
- Pooling the results
- Attempt to reduce bias
- Systematic reviews
- Meta analysis

- But there is no Cochrane Library for Environmental Health
- The epidemiological evidence from longitudinal studies is limited to very few areas

What else can we add to
the generation of an
evidence base?

- Observational studies identifying a problem
- Politically timely household studies
- Controlled evaluations of interventions
- Natural policy experiments
- Historical evidence with a long shelf-life

The need to develop a new
approach and the appropriate
skills

- Assist in assembling the 'evidence jigsaw'
- Nurture an 'evaluation culture'
- Seek a closer engagement between research and policy

Seek to become a profession of reflective practitioners:

- Engage in post-graduate study
- Enhancement of skills - CIEH training 'Make your case'
- Write up your good practice

“Like all creatures, humans have made their way in the world so far by trial and error; unlike other creatures, we have a presence so colossal that error is a luxury we can no longer afford. The world has grown too small to forgive us any big mistakes.”

Ronald Wright 'A Short History of Progress'

A final thought:

“Extending the frontiers of science and knowledge may not be as useful for improving public health as shifting the collective values of our society to act on what we already know.”

Bernard Turnock