Building Leadership for Health

Leading Information and Communications Technology for Health

Notes for Course Leaders

- **This is a toolkit for you to develop your own course**
- **It will help to involve a local expert in health systems and**
- **To provide a lecture on your own national strategy for health information and communications systems**
- **You can also introduce case studies and examples of good practice**
- **These slides are points for discussion rather than lectures**

Leading Information and Communications for Health: Agenda

- **Introduction and Learning objective 10.00-10.20**
- **Discussion of ITC issues   10.20-11.00**
- **Leading Information Management   11.00-11.30**
- **Coffee   11.30-11.50**
- **Organisational Issues in ICT   12.00-13.00**
- **Lunch   13.00-14.00**
- **Implementing ICT systems   14.00-14.30**
- **Case study   14.30-15.00**
- **Coffee   15.00-15.20**
- **Leading Communications for Health 15.20-15.50**
- **Case study   15.50-16.30**
- **Questions and reflections   16.30-1700**

Introductions and Learning Objectives

- **The group learning objective is to**
  - **Develop a shared understanding of how to lead the introduction and management of new systems of information and communication (ITC) for health**

- **What are the key problems you face in managing ITC for health?**

- **What do you hope to learn today?**

Information and communications technology (ICT) for health includes:

- Public health information and statistics

- Regional health management systems

- Hospital information systems

- Primary care systems

- Patient and Public information for health

- Health Insurer information systems

- Which of these information systems are you concerned with?

- What are the problems and opportunities?

Where are your ITC systems?

ITC DEVELOPMENT HIERARCHY

LEVEL 7 — **Web- based fully integrated, systems across locations and agencies**

LEVEL 6 — **Web-linked systems across agencies**

LEVEL 5 — **Fully integrated local systems used to manage activity**

LEVEL 4 — **Systems used to manage clinical activity**

LEVEL 3 — **Fully linked local systems with MIS**

LEVEL 2 — **Partial links between local systems**

LEVEL 1 — **Separate electronic and manual systems**

Discuss local and national position

- **Where are your systems on the scale?**
- **Where are you trying to get to on this scale ?**
- **Is there a national strategy for health ICT?**
- **Do you have a local information strategy?**
- **What are the main problems you face**
  - **Funding investment in health information?**
  - **Proving the business case for ICT?**
  - **Getting the skills for ICT?**
  - **Getting clinicians to use ICT?**
  - **Implementing ICT?**
  - **Other……**

Information Management

- **Information is a vital resource for health**
- **Information management requires**
  - **Definition of information needs**
  - **Making/reviewing the business case**
  - **Selection of contractors or systems/hardware**
  - **Implementation of hardware/systems**
  - **Introducing new ways of working using ITC**
  - **Training users**
  - **Ensuring the quality of information**
  - **Ensuring people use information and communications well**
- **This is an important task of health leadership**
- **What is your role in leading change in information management ?**

Improving health information: Discussion

- **Information needs should be defined in relation to each decision process e.g.**
  - **For health planning**
  - **For health insurance management**
  - **For budget setting and management within a hospital or a department**
  - **For the clinical management of patients**
- **In practice you need to combine data from information systems with:**
  - **What you know**
  - **What you hear from doctors, politicians and patients.**
  - **What you observe in practice**

Types of Health Information

- **Includes information**
  - **To enable people to protect their health**
  - **About the need for health services**
  - **About the performance of health services**
  - **About clinical practice and medicine**
- **These are all vital resources for health**
  - **List examples of each type of information**

Information to enable people to protect their health

- Includes: hygiene, diet and lifestyle
- Information on access and use of health services
- Information on self care and follow on care
- Hospitals now provide patient libraries and information for patients – and visitors

- Discuss: What is the relevance of this sort of information to hospital management

Information about health needs

Demographic data e.g
- Age/ sex
- Ethnicity

Vital statistics e.g.
- Births
- Deaths + causes

Determinants of health e.g.
- Housing/diet/employment
- Poverty/ employment

Access e.g.
- Referral rates by area
- Travel times

Demand e.g.
- Waiting times
- Complaints and satisfaction

Wellness e.g.
- Smoking and alcohol use
- Sexual practices
- Social support

Morbidity e.g.
- Incidence and prevalence
- Chronic illness
- Disability
- Mental illness

- Do you have access to this information, how do you use it?

Information about health performance:

- **Activity**
  - Patient throughput
  - Lengths of stay
  - Occupancy
- **Quality**
  - Inspected standards
  - Patient feedback
  - Professional standards

- **Finance**
  - Budget and plan
  - Expenditure by department
- **Economic**
  - Cost per case (DRG)
  - Health improvement

- Performance is the sum of these factors and more, how do you bring this together to make an overall judgement?

Evidence based medicine

- **Evidence based information includes**
  - **Local standards**
    - **Formularies**
    - **Protocols**
  - **International standards**
    - **Internet**
    - **EU and WHO sources**
- **Evidence based practice requires clinical teams to rethink their way of working.**
- **Discuss how you will achieve this.**

Information quality

- **Information must be**
  - **Relevant i.e. it must tell you what you need to know**
  - **Accurate – enough, no information can be 100%**
  - **Timely - available when you need to take decisions**
  - **Secure – confidential personal health information**
- **Is your health information RATS?**

Information is a major resource

- **Health is a knowledge and information based industry**

- **Each medical process produces information for the patient and medical knowledge**

- **Health information is increasingly the focus of legislation and litigation**

- **In the UK 25% of junior medical staff time is spent preparing, collating, retrieving and assessing health information.**

Health Informatics, Leadership and Organisational Issues

1. Why it is important that your organisation devotes as much effort to assessing the new organisational risks and managing those issues as to dealing with the Information and Communication Technology.

2. How you can demonstrate leadership in this area by
   knowing which human factors are most important
   assessing risks
   identifying Critical Success Factors
   sharing in others experiences
   applying lessons from elsewhere

Victor Peel,FHSM.FHIRM

Organisational Issues in Health Informatics - Context

Pressure to reduce

- – clinical risk

- – wasted time of clinicians, patients

- – professional isolation

- – wasted clerical effort

- – money

Wonderful opportunities through

rapid changes in medicine and technology

Experience shows installing small scale systems often causes major organisational disruption and problems

Organisational Issues in Health Informatics

Some common reasons for these problems……

- ICT people speak a different language!
- cut corners to reduce costs
- Length and complexity of the project
- many expensive untested systems bought
- skill shortages
- expensive and very public projects
- senior mangers with little experience of ICT
- changing the way Doctors work can be difficult

Result:serious risk to senior management careers!

Discuss: Are these project management or leadership issues?

Result: Organisational Issues and ICT – a common reaction
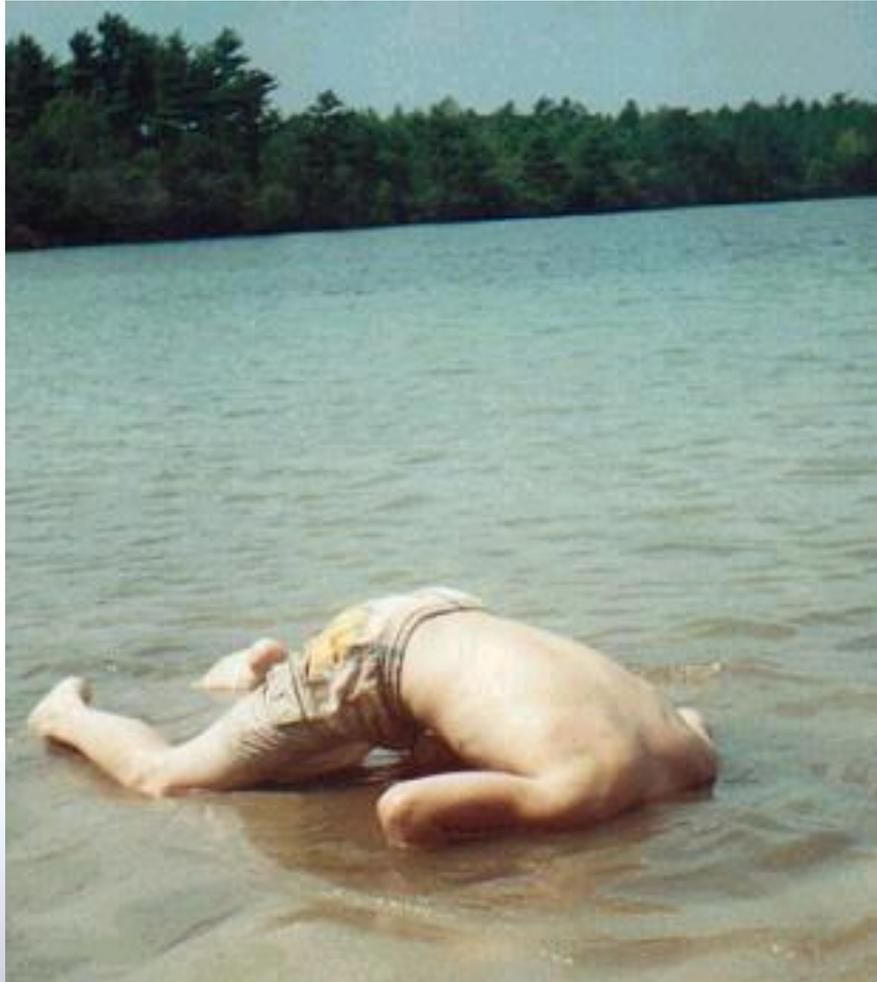
Why so complex? – 1. ICT changes the way organisations work

High

Five: Business Scope Redefinition

Four: Business Network Redesign

Three: Business Process Redesign

**

DEGREE
OF B.T.

Revolutionary Levels

Evolutionary Levels

Two: Internal Integration

One: Localised Exploitation

Low

Low   RANGE OF POTENTIAL BENEFITS
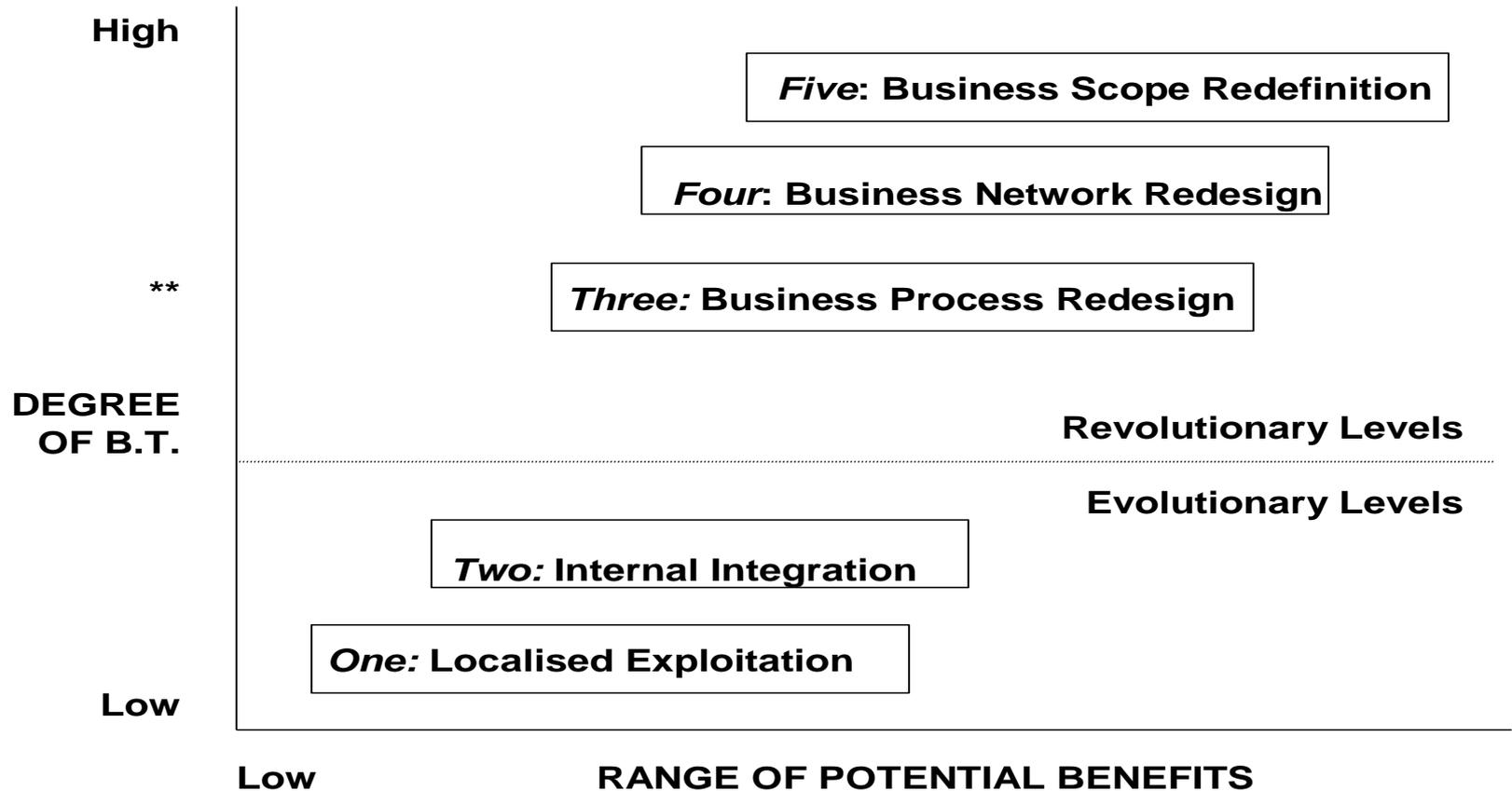
** Degree of Business Transformation

Venkatramnen
Management in the '90s

A healthcare example of this – new Electronic Health Records

EPR/EHR DEVELOPMENTAL HIERARCHY

LEVEL 7   Web- based single Electronic Health Record

LEVEL 6   Web- linked Electronic Health Records

LEVEL 5   Single organisation EPR, knowledge management

LEVEL 4   Automatic alerts/prompts, electronic prescribing/care pathways

LEVEL 3   One electronic patient file, orders and reports,

LEVEL 2   All departmental systems linked to PAS

LEVEL 1   PAS/ADT , many systems & indices

cc.VP 2001

2. Many ICT Projects are now more about 'healthcare' than 'hospitals'

- Telemedicine ,telecare, telehealth
- "virtual" electronic health record
- "virtual" personalised records for whole populations
- direct clinical input
- mobile & miniaturised devices
- multos health smart cards
- expert rules-based alerts & prompts
- citizen health information call centres

Discuss: What additional organisational complexities does this bring?

Organisational Issues and ICT– some key human issues

- **Because new ICT offers so much there are**

  - **ways of doing things that were previously impossible**
  - **many clinicians and many business process changes**
  - **many more users reluctant to change ways of working**
  - **difficult negotiations needed**
  - **often patient groups directly in the changes**
  - **organisational 'politics' and increasingly often**
  - **government politics**

Organisational Issues – experience

Worldwide, experience shows that it is the
leadership of the people involved in this process,
and how these issues are managed,
not the technology,
**that makes the difference
between success and failure of these projects**

Organisational Issues and ICT– Are there "Critical Success Factors" ?

Yes:

- An American publication found that **much research** had been done in an attempt to identify the key factors that predict EPR/EHR implementation success.

- Over 150 factors were identified, but only two**,**

  top management support and user involvement are consistently associated with successful implementations. [Dean Sittig]

- Leaders solicit meaningful clinician input early, often and and then act upon it

Organisational Issues – a dilemma?

- Some management teams believe that ideas should be well fleshed out and ready for implementation before discussing them with clinicians.

- When that occurs, do clinicians feel their input is actually sought?

- If they recommend changes at that point, will it be difficult for management to lead if they then retreat/rethink/change course?

- According to those involved in successful clinical information system projects, **"Clinician buy-in will require that their involvement is substantial and real - they need to believe that the decisions they make matter."** [Krall]

Organisational Issues – lessons learned

The healthcare systems that **engage their clinical constituents early and often in the beginning will reap huge returns** when these clinical leaders support the necessary changes* that will occur as clinical information systems are rolled out. [Schneider]

(*and the inevitable unexpected problems-vp)

Other Organisational Issues – the ICT/user reality gap?

- Do clinical system designers really not know how clinicians think and work?
- **Much ICT still has a clerical, not clinical, focus**
- Do most clinicians see 'the big picture'?
- **Most benefits are to junior staff**
- Are benefits intangible and difficult to value?
- Many benefits to clinicians are invisible to management
- **Is implementation of these projects a more organic than a systematic process?**

ICT Projects must assess the level of 'human factors' risks

- Establish extent of shared organisational need and understanding, eg
  - why is the project really being considered?
  - what must it do well?
  - what is realistically achievable?
  - who must be involved?
  - when will the implementation finish?

Organisational Issues – undertake a risk assessment

- Establish if the organisation has learned any lessons from experience

  - were previous investments well used?

  - was what was asked for, what the users really needed?

  - Where are systems like this already in use?

  - what went right…and wrong?

  - how do you know that?

Organisational Issues - risk assessment

- Can you create a good organisational and ICT 'fit'?
  - What evidence that work practises have,can and will be changed?
  - Can the system be adapted to future changes in practise?
  - What is the extent of the change involved?
  - Are the intended users willing to change?
  - Is the training budget 30% of the project costs?

Organisational Issues - risk assessment

- How strong is the project team?
    - experience with this scale of procurement and implementation?
    - what will success look like?
    - who is managing expectations?
    - is there expertise in these organisational issues?
    - is the Project sponsor a Board member?

Organisational Issues and ICT– are there also "Predictive Failure Factors"?

- Immature ICT

- Project team technically focussed

- Project driven by excitement

- Management too "visionary"

- Politically motivated project

- System sold to,not bought by, users

- Expectations not managed

- ………..

Discuss other examples

Organisational Issues – the longer term Critical Success Factors?

- The ICT must have a clinical (not just medical) focus
- A mature and stable clinical/managerial relationship
- Previous sound management of the organisation
- Previous sound management of less complex ICT
- Executive, realistic, leadership
- Routine use of the system by senior clinicians
- Clinically valued / Perceived value for money

How relevant are these Critical Success Factors to your organisation?

Health ICT and Organisational Issues

In short

always insist that your organisation pays as much,
if not more, time and money to assessing
and managing the organisational risks and
issues as to the selection and purchasing
of the ICT.

Thank you
Victor Peel

Working through these issues can take time, almost as much as........

Women Waiting For The Perfect Man

Implementing ICT Systems

- **First define your objectives**
  - **How should the system improve health?**
  - **When will it be fully operational?**
  - **Targets for accuracy, timeliness, use ?**
  - **How much will this cost and save?**
- **Set SMART objectives**
  - **Specific**
  - **Measurable**
  - **Achievable**
  - **Relevant**
  - **Time bound**

Implementing ICT systems

- **The implementation management team:**
- **Project Board**
  - **Chief Executive**
  - **Director of Finance**
  - **Director of ICT**
  - **Chief Medical/ Nursing Officer**
  - **Project manager**
- **Implementation team**
  - **Project manager**
  - **Technical support**
  - **Doctor/nurse trainers**
- **User groups**
  - **Doctors and Nurses**

Implementing ICT systems

- **Discuss objectives with user groups**
- **Agree targets and milestones**
- **Set out project control plan**
- **Allow for user group review**
- **Build in training requirements**
- **Ensure technical support team is around to adjust system to user needs**
- **Provide user group reports to the project board**

Project Control Charts: Gantt Chart

Vertical Axis:
Tasks

Horizontal bars used to denote time.

Task 1.1

Task 1.2

Task 1.3

Task 1.4

Task 2.1

Task 2.2

Milestone 1
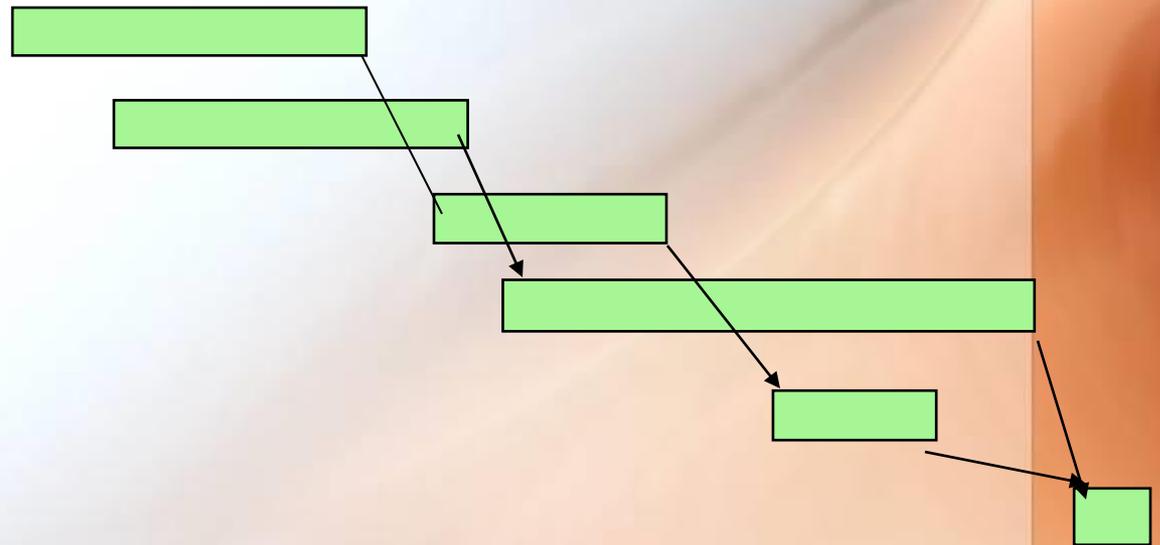
Time

So what can go wrong?

- **Everything !**
- **Think ahead to identify key risks**
  - **Changes to current working practice**
  - **Lack of training for new staff**
  - **Disillusionment when first result wrong**
  - **Time and cost overruns**
  - **Always allow more time in the plan**
- **Implementing ICT systems is a test of leadership and management**

Case study : ICT Implementation

- **Describe an information system you will introduce in your hospital**

- **Define goals for its introduction**

- **Propose an implementation team**

- **Set out key stages and milestones for introducing the system**

- **Describe the main risks you face and how you will deal with them**

Communications for Health

- **Roles in communications for health**
  - **Providing expert guidance**
  - **Using statistical information**
  - **Drawing on specialist knowledge**
  - **Integrating information from many different sources**
- **And also**
  - **Listening to local concerns**
  - **Talking with groups and individuals**
  - **Helping people move from knowledge to action**

- What special skills are required to lead communication for health ?

Leading Communications for Health

- **Some lessons from experience**
  - **Define the problem**
    - **To get a clear view of the information you need**
  - **Gather as much as possible include**
    - **Policy, Statistics, Expert knowledge, Incident information**
  - **Question your sources, are they**
    - **Relevant, Up to date, Accurate, Complete**
  - **Listen to and understand what others want to know**
    - **The concern of local people – what concerns them?**
    - **Local political leaders – what should they do about it ?**
    - **Journalists – what story are they after ?**

Case Study on Communications

- **Over the weekend your hospital experiences a heavy workload due to patients with lung problems. You ring your senior colleagues ask them to prepare information and report back.**

Monday morning**:**

- **Several patient die of a mysterious disease. More patients have been admitted to hospital suffering from severe lung problems.**

- **Initial investigation shows it may be Legionella . All had attended an international flower market. There were thousands of visitors to this. The market reopened on Monday morning.**

Meeting

- **A meeting called by the mayor later on Monday.**

- **Present: Mayor, Director of Public Health, Director of Hospital, you may ask one or two others to attend.**

- **The press and TV are waiting outside the office for information.**

- **A deputation of the relatives of the patients admitted to hospital is also waiting.**

Case Study on Communications

- **What information did you ask over the weekend?**
- **Form a team to deal with the crisis**
- **Appoint chair, spokesman and medical expert**
  - **Review and identify the problems**
  - **Identify the information you will need**
  - **Identify who you need to communicate with**
  - **What will they want/need to know**
  - **What are your key messages**
  - **Prepare to speak to each group**
  - **Establish a simple communications strategy**
    - **In what order will you see them**
    - **What will you listen for**
    - **What will you communicate**
    - **How will you run the meetings**

Case Study on Communications

- **Role play the meetings**
  - **Hospital spokesman**
  - **International and local press (hounds)**
  - **Relatives and community leaders**
- **Give them a hard time life is not easy in these cases !**
- **Evaluate how they managed**
  - **Did they address the concerns?**
  - **Did they listen?**
  - **Did they handle the difficult situation well?**

What actually happened?

- In real life this was the worst case of Legionella in the Netherlands with a high death toll.

- It resulted from a device on show at the market which gave off a fine mist.

- Communications were not well handled the mayor was hounded out of office and others lost their jobs.

- Because they did not think carefully enough about how to handle the problem and the communications with the victims, public and media

- We hope you did better!

Questions and Reflections

- **Please discuss and write down**
  - **What you have learnt that you found helpful**
  - **What you will do differently as a result of today?**

  Thank you,

  Graham Lister and Victor Peel

Module contributed by

- **Graham Lister-** who advised the NHS in England Wales, NI and Scotland on ICT strategies and led several major implementation programmes.

- **Victor Peel-** as chief executive of Bolton Health Authority, and then Senior Fellow University of Manchester advised the Department of Health PAHO and WHO on ITC strategy for health. In 1988 established the first UK Centre for Health Informatics

- Gained worldwide recognition for appraisal of ITC programmes

- Author/ editor of 4 books, 22 refereed papers, 30 articles