What can research do?

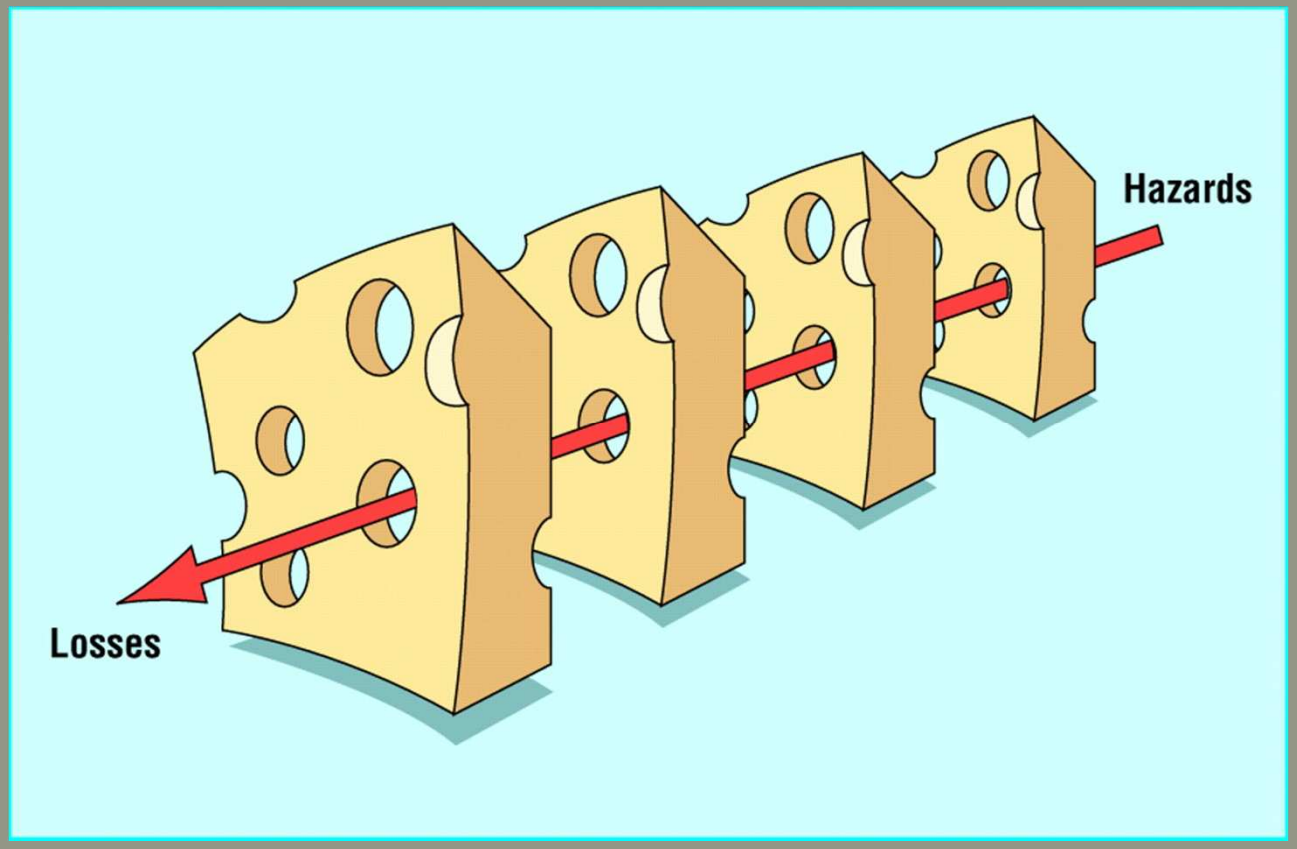
- Identify solutions to problems
  - Mechanisms
  - Options
  - Implementation, including potential barriers
  - Document/monitor implementation and outcomes

- Research into implementation = implementation research
- Building concept of ‘impact at scale’ into our research designs

Transfusion research: what and how?

- Defining the research question
- Choosing appropriate methodologies
- Many different methodologies – basic science, observational, interventional RCTs, data linkage, registries etc
- Value of pilot studies
- Examples from other settings
- ‘Real life’ generalisability vs trial data (HV ‘real life’ data)
- Impact of human factors (HR research) and systems
- Systems engineering research to design/implement better systems

The Swiss cheese model of how defences, barriers, and safeguards may be penetrated by an accident trajectory



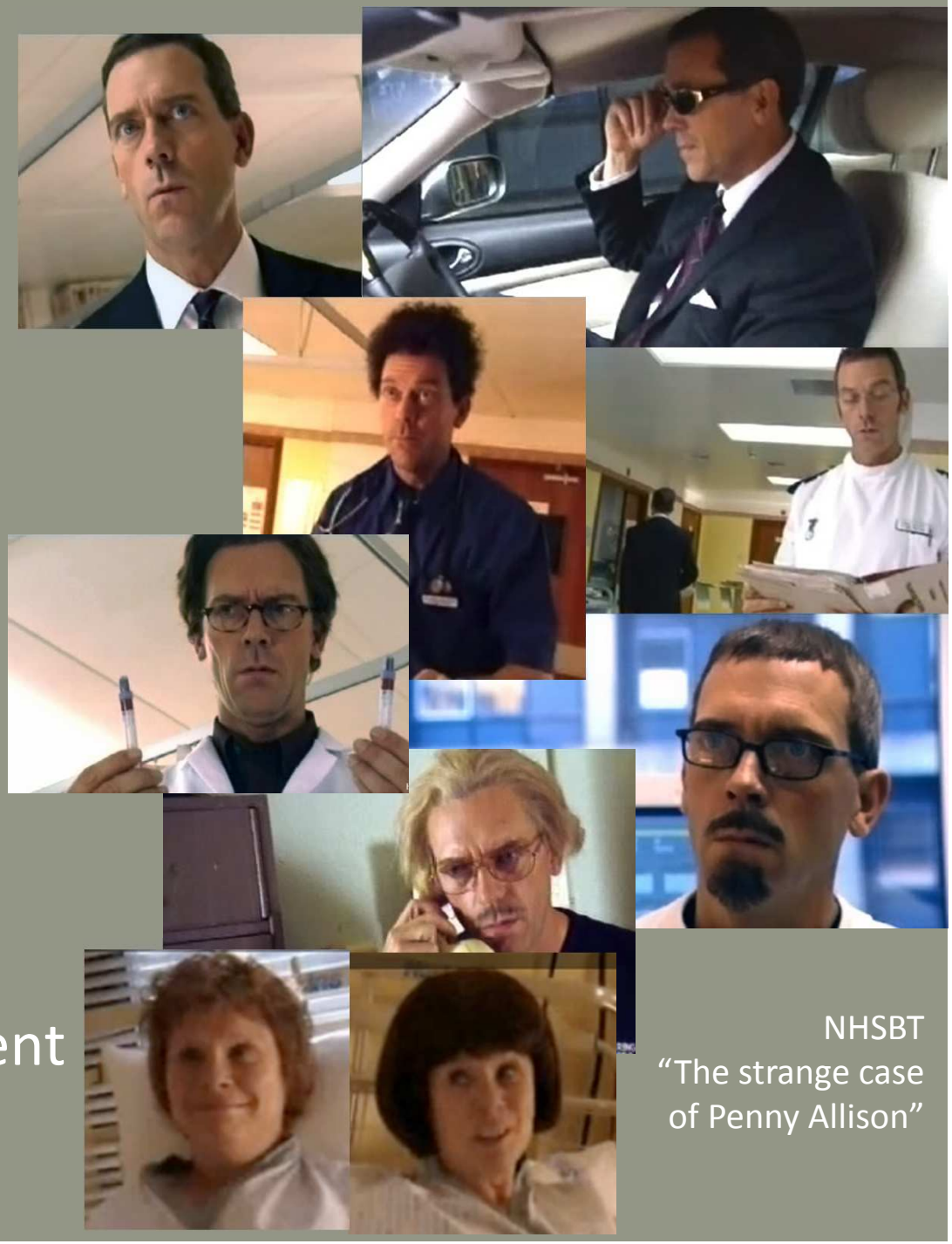
James Reason: Human error: models and management. BMJ 2000

Transfusion research: who?

- Multidisciplinary transfusion team – medical, nursing, scientific
- Work with other clinical specialties, management
- Patient and donor participation
- Know (or find out) where to get skills you need (database, biostats, cost-effectiveness analysis)
- Training in research methods

Who?

- Medical
- Nursing/midwifery
- Phlebotomy
- Scientific/technical
- Other hospital staff
  - Porters
  - Quality/risk
  - Executive
- Patients and families
- Others e.g. government



NHSBT
"The strange case of Penny Allison"

Transfusion safety: the potential role of the patient

Davis, Vincent, Murphy
TMR 2011

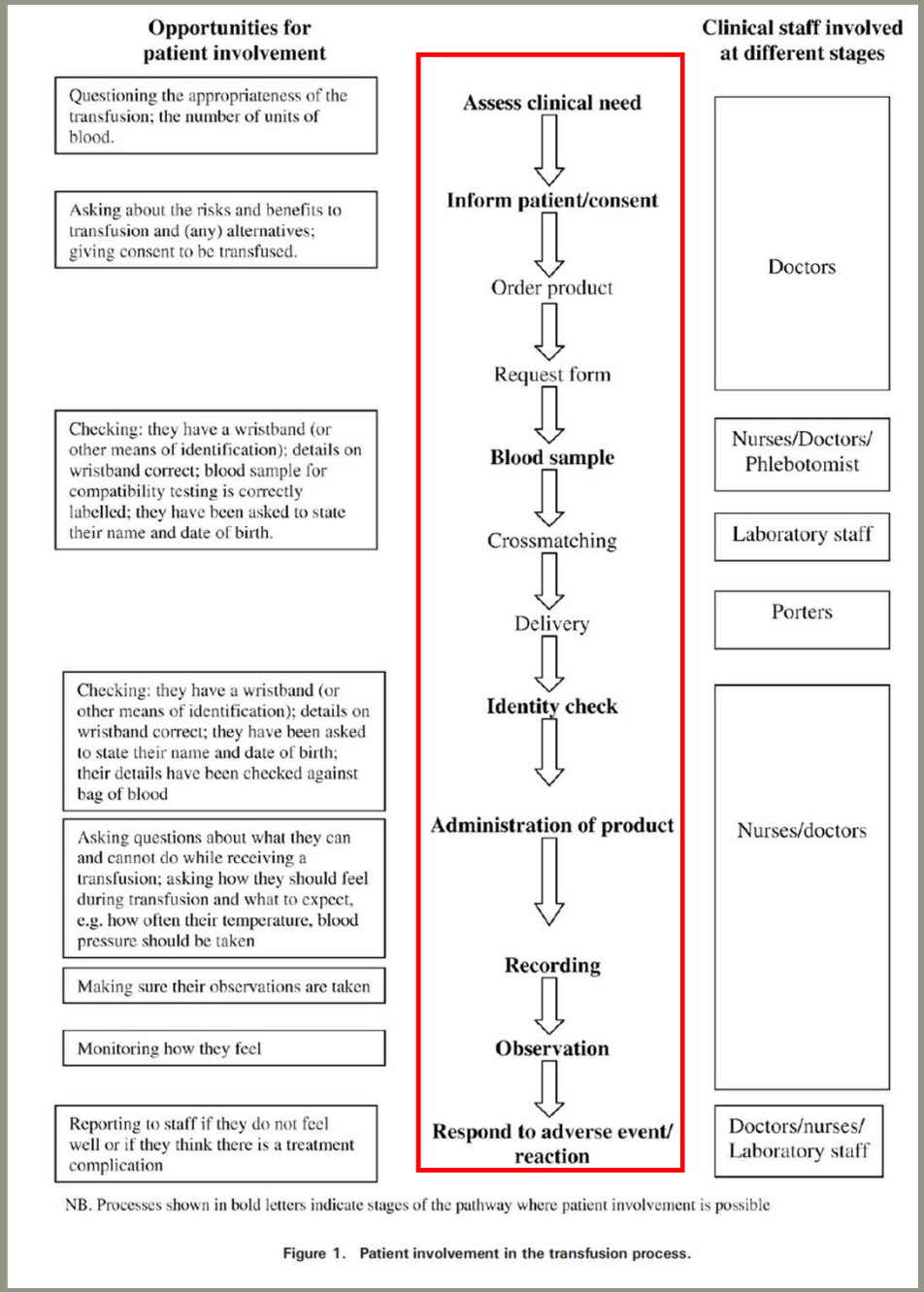
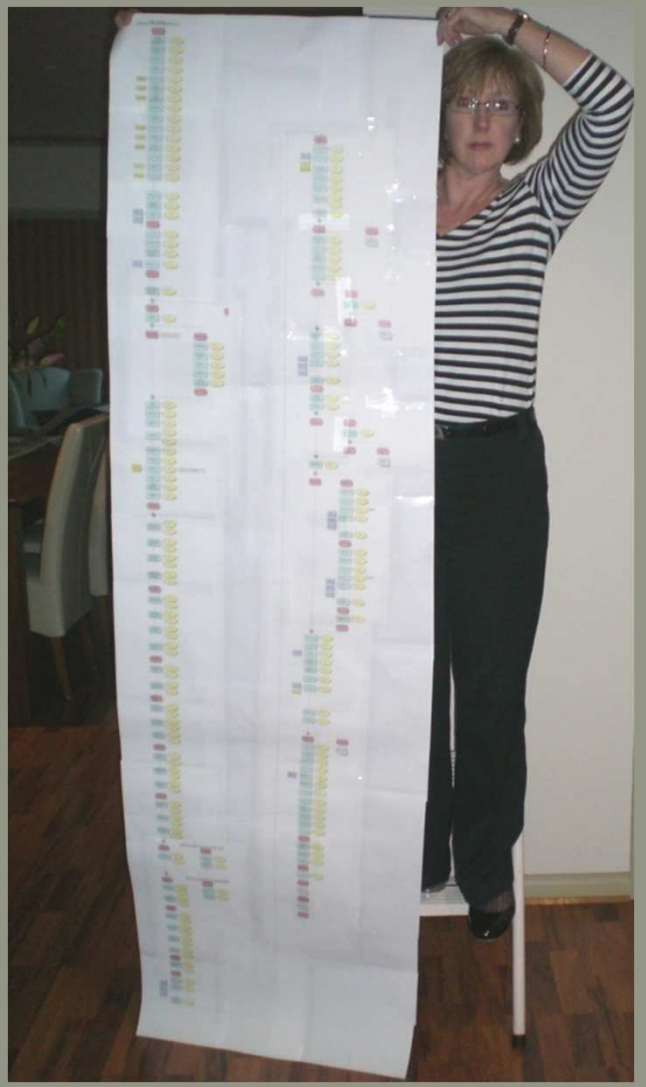


Figure 1. Patient involvement in the transfusion process.

Data

- Many data sources – clinical audit, outcomes of RCAs/M&M meetings, registries (clinical, administrative etc), HV reports
- Don't always need new data – may need access (e.g. clinical and lab IT systems, administrative datasets)
- Understand quality and limitations of the data you have
- Make an solid investment in high quality data (consider adding 'formal' research element to projects)
- Careful data analysis



What do we need?

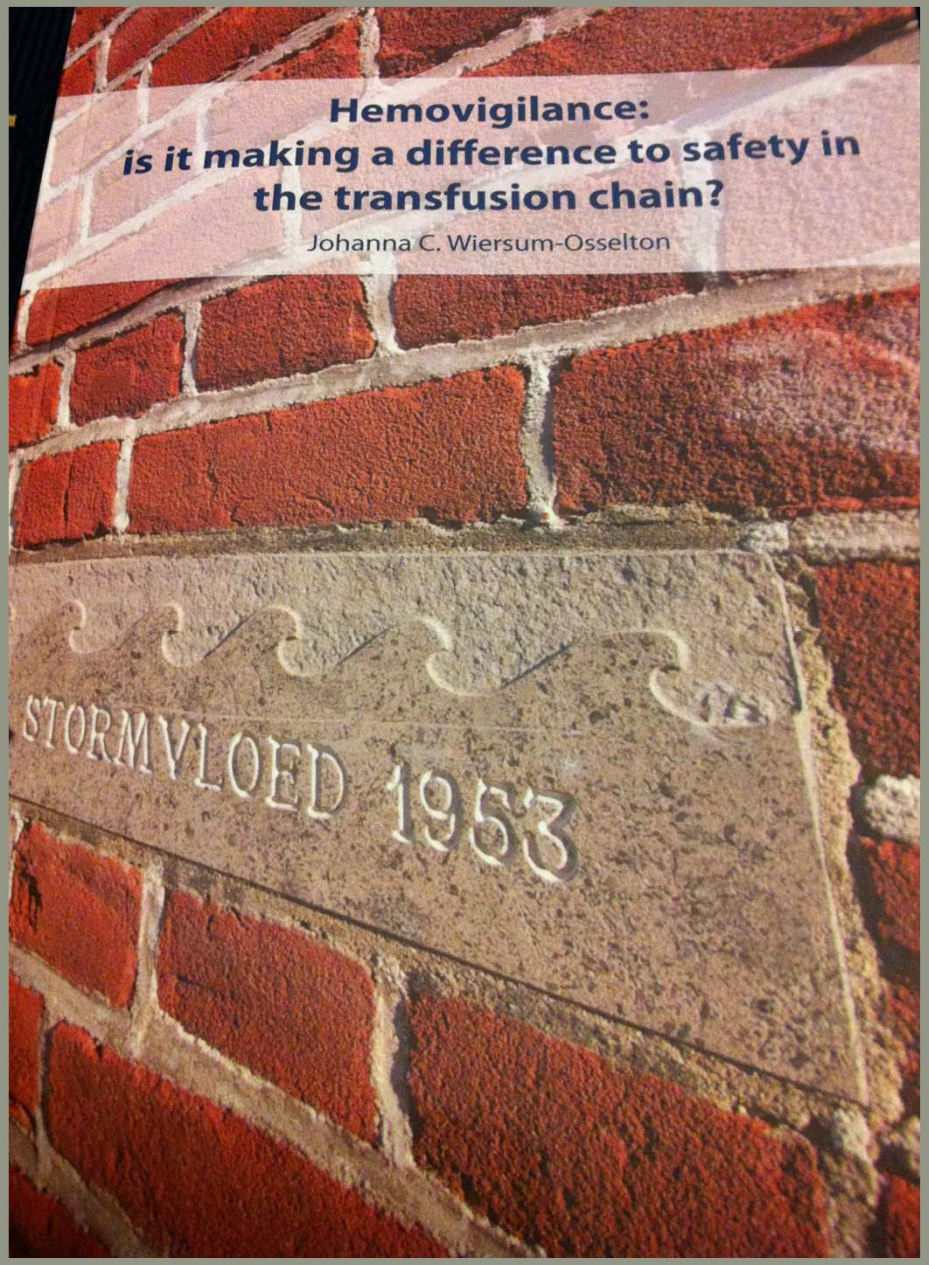
- Implementation of research and HV findings
  - Local executive support for uptake of best practice recommendations
  - Incorporate implementation into research proposals
- Protected time for clinicians to get research into practice
- People with training in transfusion research methods
- Training opportunities and career options
- Sustainable funding models for transfusion research
- Better research infrastructure – including for international collaborative studies
- Publication of HV findings in peer-reviewed journals

Other important 'positives' of transfusion research

- Engagement:
  - Encourage interest in transfusion through projects
  - Morale and team-building, staff retention
  - Promote cross-discipline interactions
- Career development:
  - Get involved, learn new things, make good use of knowledge
  - Presentation/publications
- Capacity building
  - 'Upskilling' of participants, e.g. understanding AE mechanisms, biostats, return on investment in training and education
- Enable/demonstrate better use of resources
  - Stewardship of donor gifts, community investment

Conclusions

- “Ideal” scope of HV to be defined
- Definitions of events may change over time
- HV can identify serious problems
- Research can help solve some of these
- Making progress in reducing some risks: e.g. TRALI, bacterial contamination, some IBCT/consequences
- Heightened awareness of other hazards
- Need a broad approach to research, methods
- Work to do – and many opportunities



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PLEASE NOTE
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