MANCHESTER 1824

The University of Manchester
Institute for Collaborative
Research on Ageing


# VOICES

## in the waiting room

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University of Salford MANCHESTER

University of Manchester:

- Dr Ian Brown, School of Nursing;
- Dr Susan Rutherford, Department of Music;
- Dr Tim Wilding, Audiology & Deafness Research;
- Dr Jo Hart, Manchester Medical School.

University of Salford:

- Dr Bill Davies, Acoustics Research Centre.


Engagement and consultation events

Literature reviews

***Thanks** to **Jane McDermott** and **Josie Messina***

# Waiting room experiences

Variable, but poor experiences common

- Lack of respect, eye contact, personal attention
- System unclear
- Noisy, poor acoustics and layout
- Difficult to hear
- Voices - shouting or too soft

Stressful and anxiety inducing

# Communication issues

- Respect, welcome, personal attention
- Face / eye contact, smiles, body language
- Voices too soft or shouting across room
- Patronising or impersonal system

# Physical environment

- Bleak rooms add to stress
- Poor acoustics and soundproofing
- Poor layout and lighting
- Glass and other barriers
- Sound loops and amplification not used consistently or well

# Organisation and process issues

- Mixed or inconsistent systems
- Don’t know where to sit or which way to face
- Don’t know where in queue
- Screens with name or number not always a help on their own
- Personal contact preferred
- Use ‘buzzers’ or other technologies – widely available in shops and restaurants

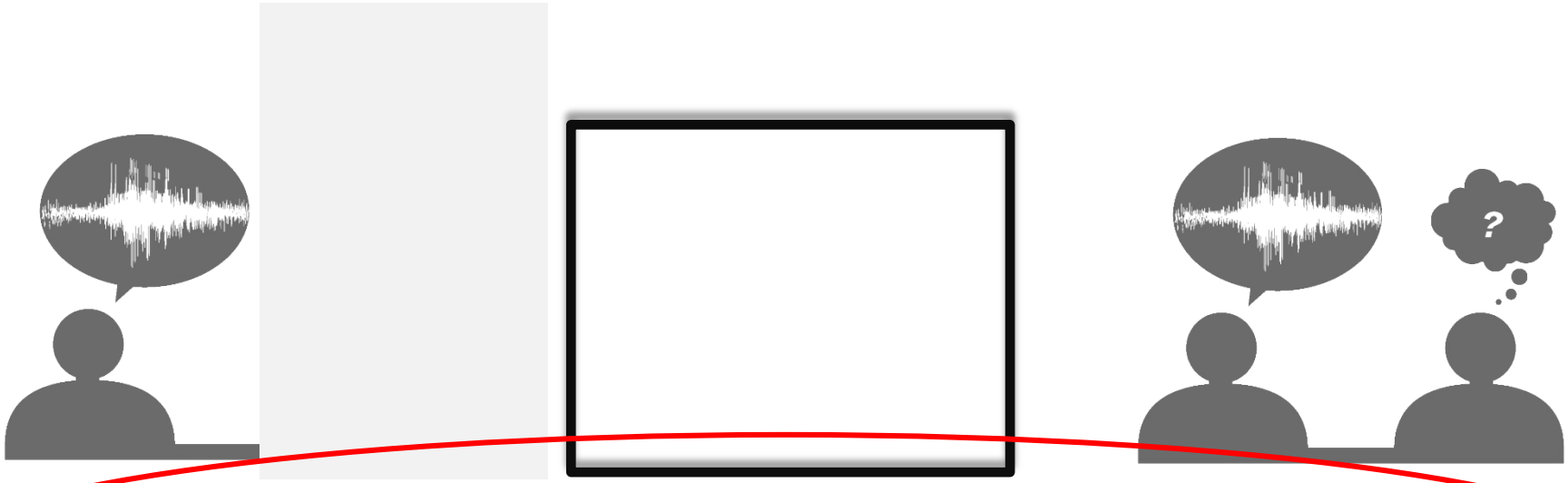
# Noise …!  ‘… unwanted sound ’

From a variety of sources:

- Air-conditioning
- Printers and computers
- TV and radio
- Other occupants speech
- Use of mobiles

Noise tends to be ignored

# Intervention elements




- Communication skills
- Physical environment
- Organisation processes

# Existing interventions ….?

- Small evaluation studies – positive about improving noise and patient satisfaction with a team quality cycle (audit) approach
- Patient feedback can be a key ingredient for improving communication processes

# Literature

**Search terms**:

- Noise OR noisy OR acoustic* OR hearing OR speech intelligibility

AND

- primary care OR medical care OR family practice* OR family medicine OR general practice* OR hospital* OR secondary care OR health clinic OR community health cent* OR health care cent* OR health-care cent* OR doctor* office OR doctor* surgery OR health care OR health-care OR emergency Or outpatient* OR waiting room* OR waiting area*

**Databases**:

- Medline, CINHAL, Web of Science, ASSIA

# ***Noise*** - a problem on hospital wards

**Patients**

- Sleep disturbance
- Cardiovascular effects – anxiety, increased BP and pulse
- Length of stay
- Pain management, wound healing

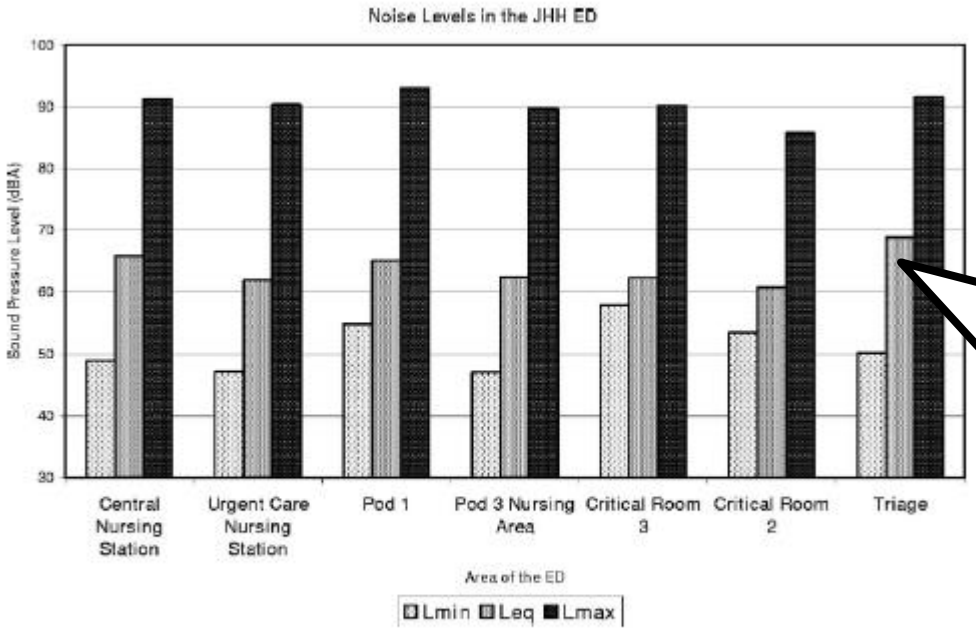
**Healthcare staff**

- Stress
- Satisfaction
- Job performance
- Health

… but little research about waiting areas

# Noise in the adult emergency department of Johns Hopkins Hospital

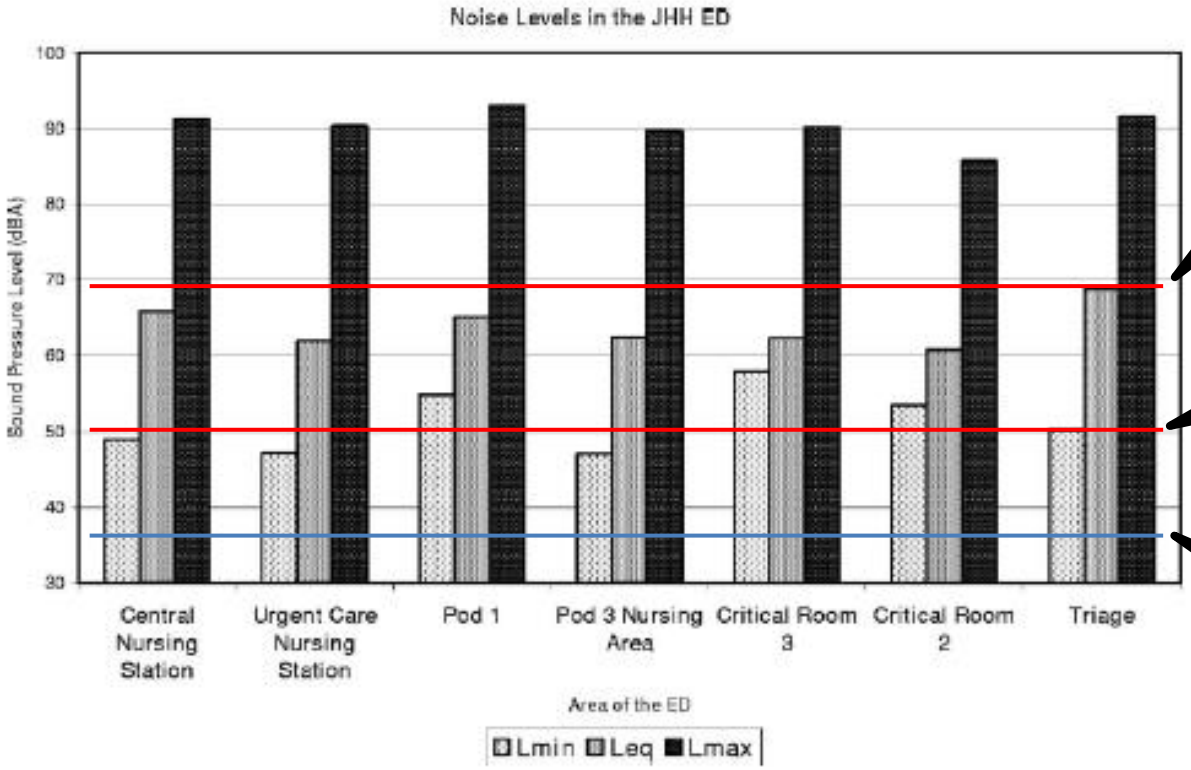
Douglas Orellana, Ilene J. Busch-Vishniac,[a] and James E. West
*Johns Hopkins University, 3400 N. Charles Street, Baltimore, Maryland 21218*




'Triage' …
most like a typical waiting room:

Lmin: 50 dB(A)
Leq: 69 dB(A)
Lmax: 92 dB(A)

J. Acoust. Soc. Am., Vol. 121, No. 4, April 2007




Leq = 69dB(A)

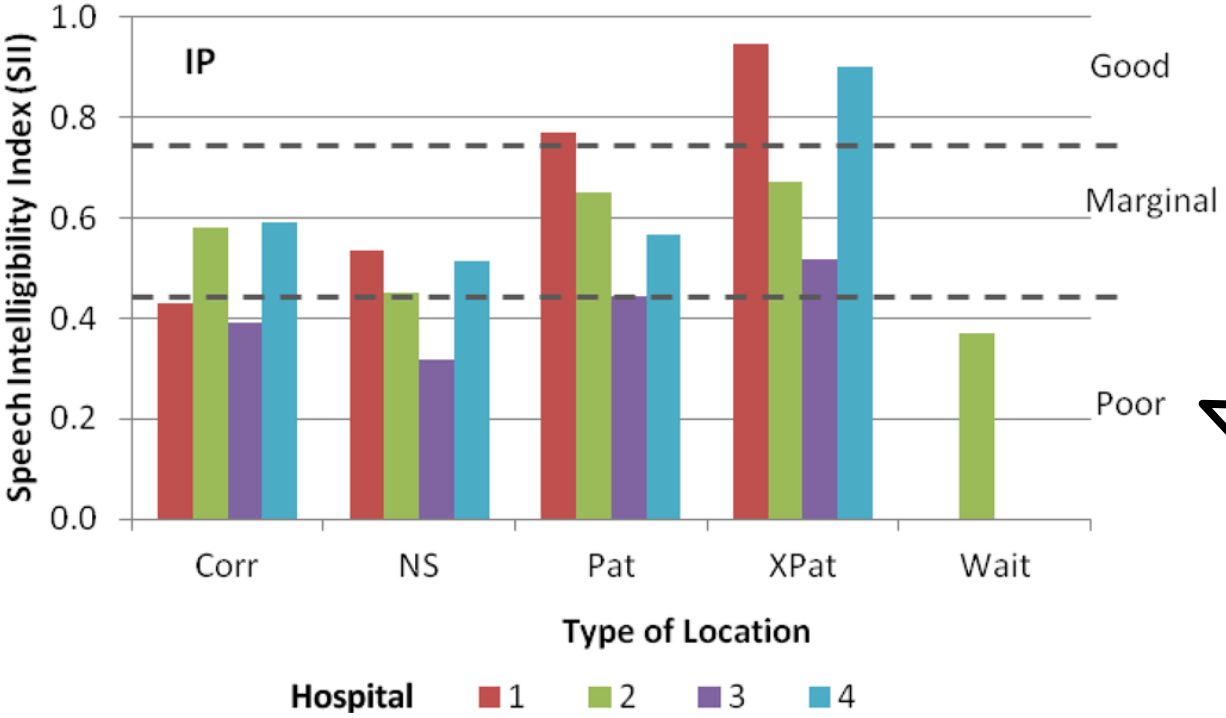
DoH guideline

WHO guideline!

J. Acoust. Soc. Am., Vol. 121, No. 4, April 2007

# Speech intelligibility

- Measured via Speech Intelligibility Index
- 5 hospitals x 5 unit types x 6 locations




Waiting area:

intelligibility poor

Ryherd, E. E., Moeller Jr, M., and Hsu, T. (**2013**). "Speech intelligibility in hospitals," The Journal of the Acoustical Society of America **134**, 586-595.

*Research in Nursing & Health*, 2013, 36, 228–241

# Effect of Hospital Noise on Patients' Ability to Hear, Understand, and Recall Speech

Diana S. Pope,[1,2*] Frederick J. Gallun,[2**] Sean Kampel[2†]

'… our findings suggest many hospitalised patients may not easily understand what is said to them even in quiet conditions.'

# Distinct vocal style types ….?

- Conversational
- ‘Elderspeak’
- Lombard
- Clear speech

# Distinct vocal types

- ~~Conversational~~
- ~~Elderspeak~~
- ~~Lombard~~

- **Clear speech**

# Healthcare practice and training

- Assume voice style types are partly instinctive response to communication difficulties
- Training required to get it right – it is a potentially tricky balance
- General guidance is good but vague and may be contradictory in places
- No detail of how to train or manage voice qualities in noisy environments

# Summary so far…

1. We have identified a problem that concerns service users and suitable for intervention
2. There has not been robust research on this issue in the NHS
3. We have a good sense of what an intervention would comprise – multiple elements within a training and quality cycle package

# Further research

1. Explore fully and quantify the issues and relationships between variables
2. Develop a ‘need and outcome’ measure suitable for an evaluation with potential to be a practical quality indicator
3. Develop a refined intervention package and evaluate for feasibility
4. Evaluate

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