Gender and productivity in medicine

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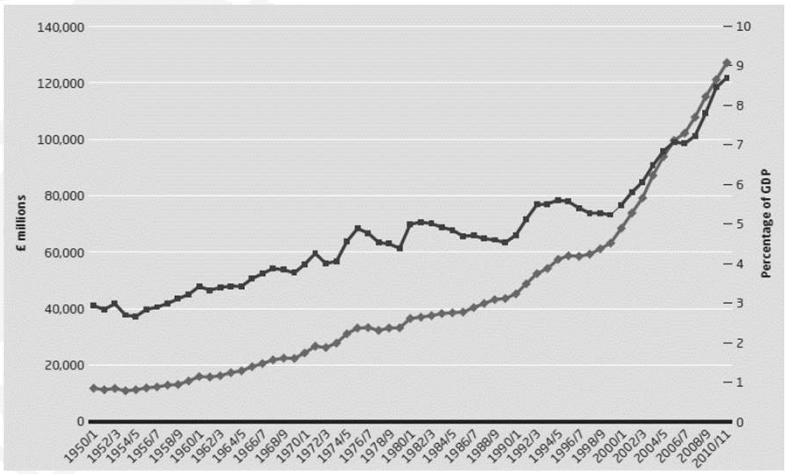
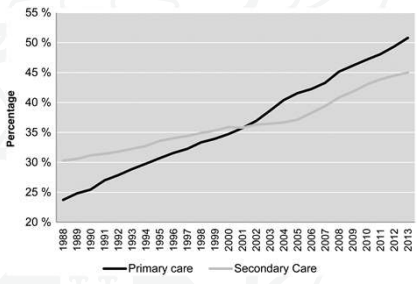
Outline

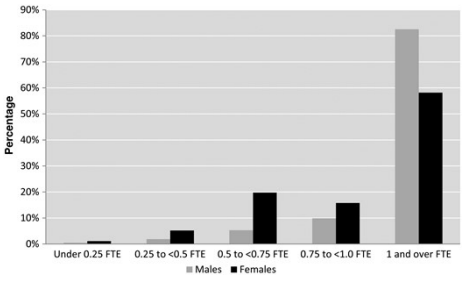
- Productivity in medicine
  - How variable is consultant 'productivity'?
  - How is it changing over time?
  - What consultant characteristics predict productivity levels and trends?
  - Gender and productivity – quantitative findings
- Exploring gender and productivity (Laura Jefferson)
  - Communication and gender – systematic review and meta-analysis
  - Qualitative study – working lives of hospital consultants

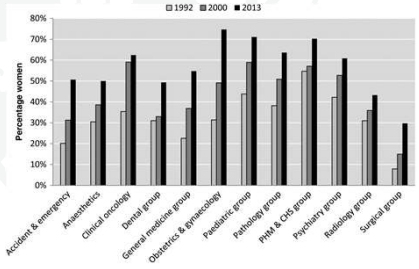
Context (1)

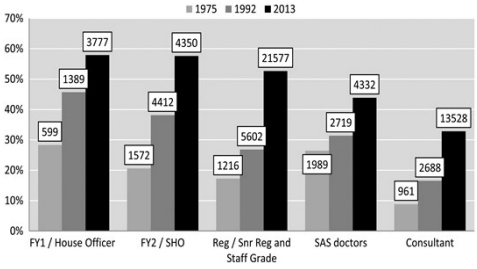


Context (2)







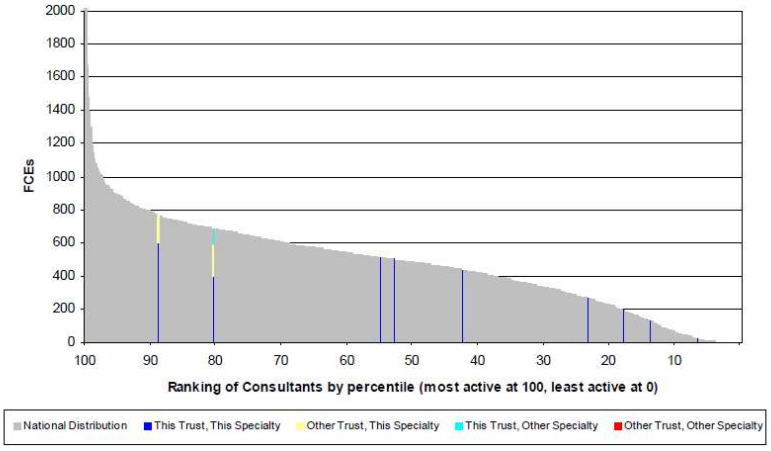


Women in medicine: historical perspectives and recent trends. Br Med Bull. 2015;114(1):5-15. doi:10.1093/bmb/ldv007

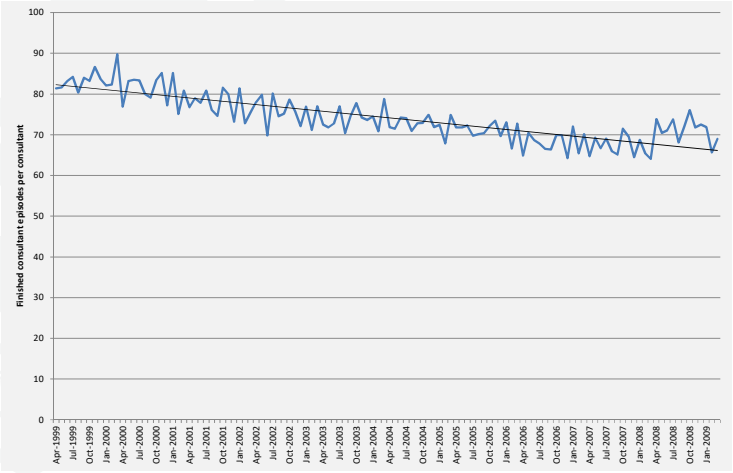
Measuring productivity - data and methods

- Hospital Episode Statistics (HES) for England
  - Record level data for each patient episode, including a consultant code
- Linked with data about hospital consultants
  - e.g. age, gender, contract status
- All episodes of patient care in England in ten hospital specialties over ten years
- Mixed models to identify consultant predictors after accounting for specialty and hospital level effects

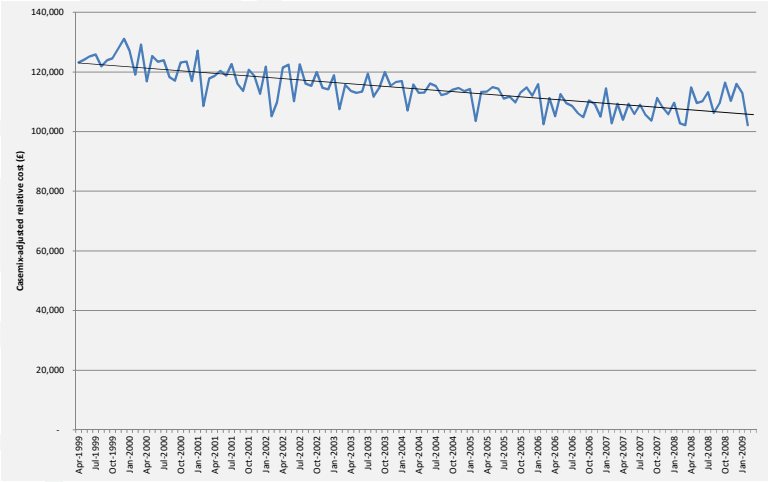
Ranked consultant activity, trauma & orthopaedics



Trends in consultant clinical activity rates over time



Trends in activity after case-mix adjustment



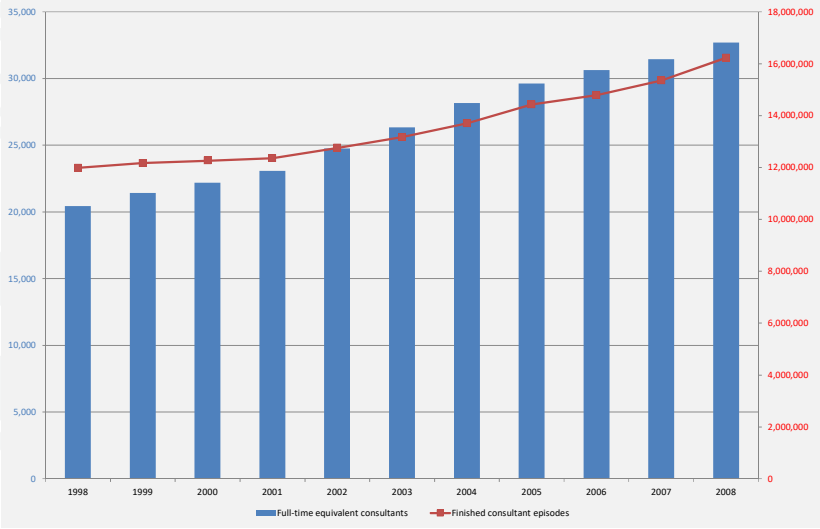
Why a downward trend?

Increasing safety and quality of care?

Changing characteristics of the consultant workforce?

"Wait, this one's a lawyer. We'd better wash our hands."

Increasing consultant and patient numbers

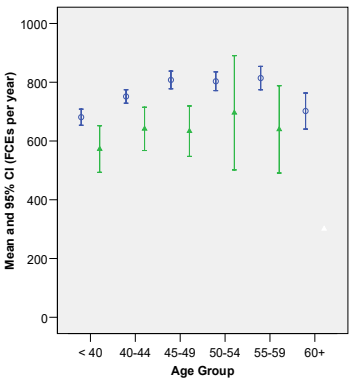


What characteristics predict consultant activity rates?

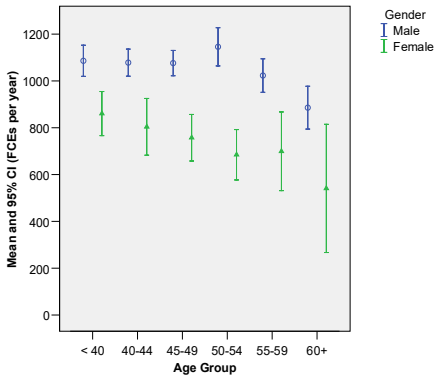
Consultant age?
Consultant gender?

Consultant age and gender

Surgical specialties



Medical specialties

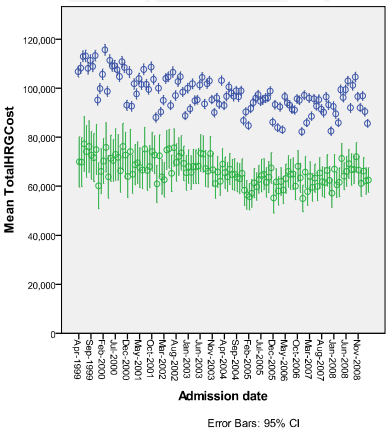


Mixed model results – consultant gender and reward
(single cross section of full-time consultants accounting for age, specialty and hospital

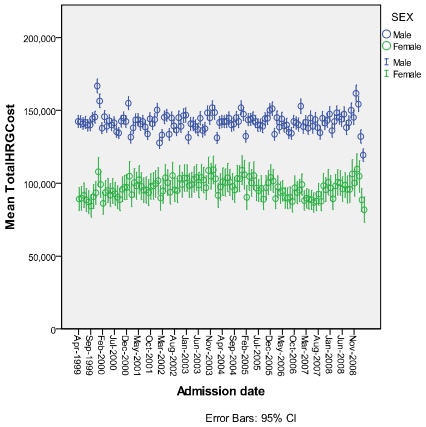
Effect	Estimate	95% CI	*P* value
Model 1: Finished consultant episodes (FCEs) per year			
Sample:[1] 6451 male and 886 female			
Gender effect (additional activity by men)	**160**	**116 to 204**	**< 0.0001**
Model 2: Case mix adjusted activity (£000) per year			
Sample: 6448 male and 884 female			
Gender effect (additional activity by men)	**214**	**147 to 280**	**< 0.0001**
Model 3: FCEs per year including contract and bonus payments			
Sample: 6451 male and 886 female			
Gender effect (additional activity by men)	**153**	**109 to 197**	**< 0.0001**
Contract effect (additional activity by maximum part-time contract holders)	75	39 to 112	< 0.0001
Effect of discretionary point or local CEA	48	17 to 79	0.003
Effect of distinction award or national CEA	-6	-53 to 39	0.8

Gender differences over time (all full-time consultants)

Surgical specialties



Medical specialties

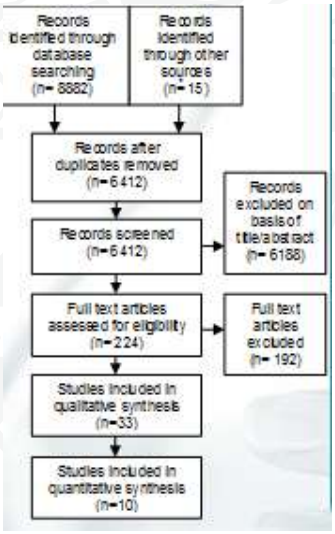


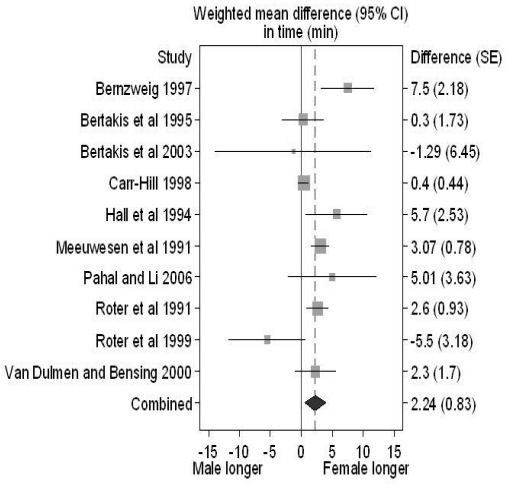
What creates the gender difference?

- Systematic review of doctors' gender and communication
- Qualitative observation and interview study exploring contextual differences in doctor's work
- Survey of BMA members

Of course I'm listening to you – don't you see me making eye contact, leaning towards you and nodding empathetically?

Gender and consultation length: systematic review





Gender and the working lives of hospital consultants: qualitative study

- Observation and interview methods.
- Two NHS hospital trusts in England.
- Data were collected from 13 participants working in a variety of specialties and in a range of clinical and non-clinical settings.
- Various behaviours, attitudes and experiences were explored, such as doctor-patient communication, interactions with colleagues and workload.

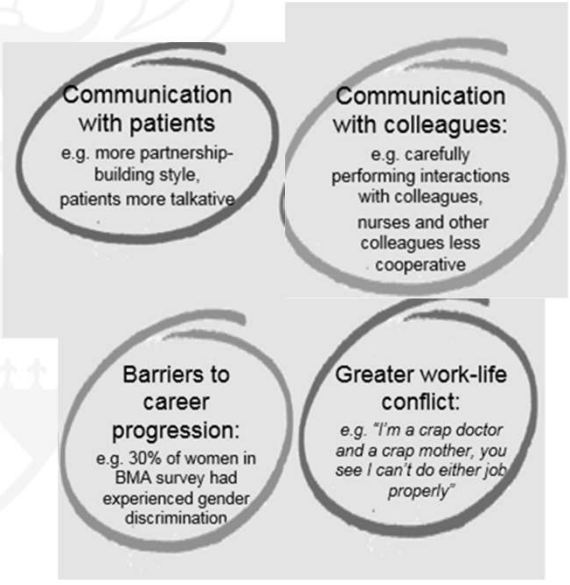
Qualitative study: observation framework

Setting (e.g. clinic, ward, theatre, meeting)
Interactions with patients (e.g. nature and style of information exchange, partnership building, patient centredness, socio-emotional behaviour, balance, non-verbal communication)
Interactions with other staff (e.g. staff type, nature, duration, interruptions)
Activities between seeing patients (e.g. nature, duration, other people present)
Overall reflections

Qualitative study: interview topic guide

Managing workload (e.g. how do you manage competing demands during your day?)
Approach to work (e.g. organisation, prioritisation, inter-actions with colleagues and patients)
Other responsibilities (e.g. outside of work, are there any other commitments that affect your day-to-day work?)
Working team (e.g. can you describe your working team and what influence they have on your workload?)
Perceived gender differences (e.g. do you think you work differently to your [*male/female*] colleagues?)
Changes in medicine (e.g. do you think that the culture in medicine has changed over time?)

Qualitative study: key findings



Gender and the working lives of hospital consultants: implications

- Medical schools, Royal Colleges need to support women in their careers and challenge stereotypes
  - Use of role models, Women In Surgery scheme, perhaps need for greater training on general communication skills training (not just patient centred)
  - *Evaluation*
- More to be done to support women with home commitments
  - *Evaluation*
- There is an effect on quantity of work, but what about quality?
  - Many findings e.g. greater patient-centredness in communication style may relate to quality

Summary

- 'Productivity' of hospital consultants shows considerable variations – between individuals, and groups, and over time
- Clear differences in clinical activity rates of men and women consultants – robust to statistical methods, consistent over time
  - Statistical analysis can't tell us why this is the case
- Qualitative analysis reveals gender differences in consultants' working lives
  - Communication with patients –including length (meta-analysis)
  - Communication with colleagues
  - Greater non-work demands, and somewhat less support
- Potential to improve the working lives of women in medicine, and improve overall productivity for women and men