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Practical decision support solutions in engineering and medicine
- Inter-disciplinary collaboration
- Probabilistic reasoning and risk assessment

Patient Managed Decision Support using Bayesian Networks

- Managing chronic conditions on fixed appointment sub-optimal
- Decision support could improve triage BUT lack of data for training
- Remote data available BUT burden of review
- Combine with patient decision support: safely reduce appointments

Managing Musculoskeletal conditions
- Many treatment options
- Progressive diagnosis
- Severe pathology masquerades
- Many conditions; complex data

Collaborative project to investigate decision support for high-risk surgery.
- How do patients & doctors make decisions?
- Morbidity, care use & quality of life after major surgery versus alternatives
- Co-design a decision support system, with information about the long-term outcomes

Knowledge Discovery from Health-Use Data
Can we use data from Electronic Health Record for decisions support?
- Data request or explore?
- Efficient ‘data-wrangling’
- Understand semantic structure
- Handling relations (e.g. aggregation)