SITUATION

South South West **Hospital Group** needs increase in operation theatre utilisation rate in multiple hospitals

There is huge dataset of real medical records regarding surgery cases

Different models. policies, and regulations in the hospitals of the SSWH group add complexity to the problem

GOALS

Analyse and select best approaches for efficient medical resources scheduling applicable for hospitals of South South West Hospital Group

Discuss robust and practical solutions considering origin of the scheduler to ensure scalability

INPUTS

OUTPUTS

Participants

Reviewers

Readers

OUTCOMES - IMPACT

Staff time:

- Researchers
- Advisors

Money:

- Salaries
- **Books** - Articles
- Conferences
- Software
- Training

Technologies:

- Google Scholar
- ResearchRabbit

Researches Advisors Sponsors Publisher

articles and

books Recap, structurise, and

Activities

Read

analyse the literature Organise

meetings

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Write and discuss the results Presentation of the

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Direct Products

Literature recaps

Figures and charts

Tables with parameters and modified surgery records

Systematic review

Preliminary records

research

Knowledge and

Short term

awareness in the field of advanced medical resource scheduling

systematic review Increased interest

in the field

Skill of making

Feedback from advisors, reviewers, and readers

Contacts of contributors to the same field

Intermediate

Appearance of New papers addressing robust and practical scientific gap of schedulers robust and applicable Reducing human

Long term

error regarding the

manual scheduling

Operating theatres

utilisation rate

improvement

Increase quality of

life by reducing

surgery service

costs for hospitals

with advanced

allocation

techniques

Development of more general machine learning algorithms

schedulers for

medical resources

More attention to unification of healthcare systems around the globe

medical resource Patient records reconsideration



Resource Availability, Technology Utilisation, Patient Demand, Compliance and Adoption, Cost and Budget Regulatory Changes, Technological Advances, Epidemics/Pandemics, Patient Demographics, Staffing Shortages, Economic Conditions, Geographic Location, Public Health Initiatives

ASSUMTIONS

EXTERNAL FACTORS