**Health and the 3rd Sector**

**Simon Pegg**

The tremendous value of sharing ideas between different OR practice streams was realised when over 50 people attended the Joint Health and 3rd Sector event at the University of Westminster on 2 June 2014. The event generated lively debate on subjects as diverse as the future of the NHS and the logistics of supplying drugs in Sub-Saharan Africa. It also created an opportunity for OR practitioners to share ideas, to compare approaches and to learn from each other.

The challenges in the modern Health sector are particularly onerous as UK public health funding is ring fenced and ways are being sought to increase service efficiency and skills. On the other hand, 3rd sector organisations are accustomed to working with tight financial constraints and some are quite adept at adopting soft and hard OR practices to support decision processes.

Nigel Edwards, CEO, Nuffield Trust argues that imaginative new models of care delivery are required to meet the current financial challenges. NHS England warns that by 2020-21 the gap between the budget and rising costs could reach £30bn due to an aging population and rising technology costs.

Current estimates suggest that the extent of non-value added activity within the NHS lies between 90% and 95%, offering a significant opportunity to reduce service delivery costs through efficiency gains by re-designing processes and increasing skills. In particular, the concept of increasing efficiency through flow is challenging practitioners to decide where the balance point lies between splitting work into ever smaller pieces or multi-skilling practitioners.

The main players in the health sector include the following:

NHS England are re-writing the cultural approach through the introduction of Clinical Commissioning Groups to encourage local service evaluation and testing. By encouraging public participation in the NHS they aim to develop the insight to create a more federal service.

They are also adopting a policy of specialist commissioning targeted by local health outcomes through "Lead Provider", "Alliance" and" Year of Care" type contracts. However, the complexity of patient pathways means that these types of contract could be difficult to manage and further thinking is needed to make these initiatives work. Nigel says that he believes frontline medical staff are already coming up with innovative ways of working and that this input will play a vital role in the development of the NHS for the 21st Century.

*Monitor* is the Health regulator for all UK health services responsible for overseeing Foundation Trusts and ensuring effective competition and price setting policies are implemented.

The *Clinical Commissioning Groups* (CCGs) are clinically led groups that aim to give GPs and other clinicians the power to influence commissioning decisions for patients in their local area. At the moment Nigel believes that these groups have capability and skills gaps in the areas of governance, analytics and strategy. However, the nature of the service is such that it is not possible to stop whilst changes are being made and so new techniques are needed that will allow service changes to be made safely and without service disruption.

The *Better Care Fund* manages a £3.8 billion budget to encourage health and Social Care to work more closely in local areas. Their objectives are to reduce hospital admissions and length of stay enabling patients to return home more quickly. Nigel raised a concern about the fundamental mathematical analysis suggesting that the right balance of services is difficult to determine and social care provision is in trouble.

Finally Nigel told the audience that the importance of System Leadership needs to be addressed. Governance and co-ordination across the NHS are very difficult with big decisions requiring the co-ordination of multiple actors. To achieve this, a clear systems leader needs to be established to ensure that the appropriate levels of co-ordination and communication are achieved.

*Unique Improvements* are a social enterprise, working with disadvantaged communities to find local solutions to problems. Director, Linda Henry, explained how Soft Systems Methodology (SSM) helped to define the Health and Wellbeing Strategy for North East Lincolnshire. The objectives of such a strategy are to help communities to create healthy places with healthy services and adopting healthy lifestyles.

The O.R. approach was used to build capacity, create change and improvement and develop a sustainable support infrastructure. This was achieved by making use of existing assets and skills within the community showing them how to re-engineer services to more precisely meet the local needs.

In particular, SSM was used to help demystify capacity issues, to promote understanding and to create relationships. By conducting needs analysis and skill surveys, asset maps were constructed that could then be matched with identified needs to ensure that service provision could be targeted precisely.

Simulation and modelling techniques were then used to assess how the service could be delivered and to monitor and track progress.

The N.E. Lincolnshire change champions programme offered residents three days training over a three month period and in two years one hundred and seventy change champions were created. The ideas brought into the project, combined with a commitment to make change and a workable pilot resulted in a variety of initiatives being implemented. Examples include coach training for basketball, sewing club, phone befriending service, support for families bereaved by suicide and many others.

Although the benefits of community interventions are well documented there is an increasing trend towards more precisely measuring the impacts that are claimed and to demonstrate the impact of such interventions in a clear and objective manner to the service commissioner.

Typical benefits of using technology to improve lives include; improved local skills, greater empowerment of local communities, increased awareness of sustainable living, improved housing, greater support for young families, reduced poverty and many more.

*Apteligen* were founded to help public sector organisations analyse and interpret information in ways that enable them to solve a variety of problems. Apteligen partner, John Newman suggested that beneficiaries of such interventions not only include the local community, but also local public service providers and especially health policy makers. Outcome based measures are still in their infancy and the precise definitions of outcomes and benefits need to be improved. The model in the figure on the right shows how Apteligen approach this problem.

Co-Founder of Apteligen, Sam Mackay, then described how, working in collaboration with a large national health and social care provider and a City Council, Apteligen were able to build a community navigator that enabled their client to measure the impact of their interventions.

The model outputs had to be capable of presenting the rationale to a wide variety of audiences whilst remaining easy for Apteligen's clients to explain.

The example above shows how both the cashable savings and the predicted savings from the intervention can be separately analysed and yet the individual impact of each of these is clear.

Through the use of this model, Apteligen have been able to help their clients to convince the Public Sector Commissioner of these services that the delivered service is worthwhile and is demonstrating clear and tangible benefits to the community.

Finally, Jérémie Gallien, Associate Professor of Management Science and Operations at London Business School explained how his team are using OR to improve health delivery systems in sub-Saharan Africa.

The shocking truth is that there are still over half a million deaths from malaria every year, with the majority of these occurring in Africa and South East Asia. Mortality is most prevalent in the age range of 1 to 5 years.

Even more shocking was the revelation that in Zambia, where Jérémie and his team conducted a field study, the therapies are available but too often cannot reach the population in time.

Although these therapies are regularly reaching the 72 district warehouses, getting them from these to the 1500 local health centres is a major problem particularly as many of the roads become impassable during the rainy season when the demand is greatest.

The result was that during periods of the highest malaria incidence, stock outs of the major drugs were also at their highest. The situation was worsened as local geography and climate create different problems in different areas.

Jérémie described how he and his team used discrete event simulation and optimisation tools to model the pharmaceutical distribution process. This showed that vastly improved service levels could be achieved for each of the 1,500 Health Centres. This could be achieved by using the available low cost mobile phone technology and data networks.

Whilst each presentation generated a lively series of questions for each speaker, it was clear that the varied applications of OR in different sectors had inspired many of our guests to share their experiences and ideas. Over an hour after the meeting had officially concluded there were still many lively discussions being heard maximising the opportunity to share ideas and building relationships across different sectors.

The next Third Sector meeting which is planned for November – watch this space for more details nearer to the time.

1500 words