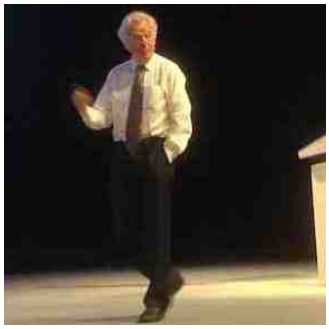
HealthManagement
Promoting Management and Leadership

#UKRC2015: Higher Value Imaging According to Muir Gray



The future is in our hands, according to Professor Sir Muir Gray presenting the Mayneord Lecture at UKRC 2015 in Liverpool today. Clinicians rather than health service commissioners need to be deciding how resources are spent on population imaging. “The future is something we have to imagine, design, plan and construct”, added Gray.

Two healthcare revolutions have already taken place - the public health revolution and the technical revolution, with such inventions as antibiotics, MRI, CT, US, coronary artery bypass graft surgery, hip and knee replacement, radiotherapy, chemotherapy, randomised controlled trials and systematic reviews. Medicine has transformed lifespan and healthspan, and people are now living longer healthier lives.

However, all health services face 5fivemajor problems:

1. Unwarranted variation, ie use of healthcare services that cannot be explained by variation in patient illness or patient preferences
2. Failure to prevent disease and disability
3. Waste of resources through low value activity
4. Harm from overuse even when quality is high
5. 5Inequity - underuse by groups in high need

Challenges are rising expectations, increasing need, financial constraints and climate change. More of the same is not the answer, even if it is better quality, safer, greener and cheaper, emphasised Gray.

Gray referred to the Academy of Medical Colleges report Protecting resources, promoting value: a doctor’s guide to cutting waste in clinical care , which defines waste as anything that does not add value. Imaging should provide provide triple value and greater equity, said Gray.

The triple values are:

- **allocative**, determined by how the assets are distributed to different sub groups in the population, between programmes and systems and within the system;
- **technical**, determined by how well resources are used for all the people in need in the population;
- **personalised**, determined by how well the decisions relate to the value of each individual

The NHS RightCare approach is promoting a new way that helps health economics discover where they are wasting money on low value or negative value healthcare and replace that with optimal healthcare and thus get greater value.

While assessing quality is still needed, we need to look at populations and reflect on value. Healthcare economies need to ask questions about value, such as how much money should be spent on healthcare, how much should be top sliced for research, education and IT and whether the money has been distributed to different areas by a method that recognises variation in need and maximises value.

Technical Value uses the equation of outcome divided by resources.

$$\frac{\text{Outcome=Benefit (Evidence-based medicine + Quality) - Harm (Safety)}}{\text{Resources (£££ + Carbon + Time, of clinicians and patients}}$$

Time has been greatly underestimated, warned Gray. The burden of treatment is very important. Carbon is very influential on the front line, and is mostly staff and patient travel, drugs, equipment and imaging.

When considering technical value, traditionally the questions are if the quality of care is being maximised, if clinical risks are being minimised and whether costs can be cut further without increasing harm or reducing effectiveness. To these should be added whether the resources that have been allocated are being used on the right interventions, whether there is the right balance of resources between different parts of the care pathway, and whether we are ensuring high value innovation by disinvestment from lower value interventions and ensuring that any innovation without strong evidence of high value is only introduced using the IDEAL (Idea/Innovation, Development, Exploration, Assessment and Long-term Studies) method.

Imaging has got away lightly with innovation, suggested Gray, as it’s hard to organise randomised controlled trials in imaging. Innovation is

funded by doing less of something that has low value. He challenged the audience to think if there are imaging interventions which have gone past the point of optimality.

Personalised imaging needs to be both evidence- and values-based, said Gray, noting that as the rate of imaging in the population increases, the balance of benefit and harm changes for the individual patient as well as for the population. This approach is summed up as "Digitally delivered evidence and integration" to promote higher value personalised and population imaging, by embedding imagine in high quality population-based systems, developing radiologists' focus on the population served, personalising care and decision-making and creating a culture of financial and carbon stewardship.

Gray concluded that the imaging community needs to show leadership, and think about how resources will be used for different patient groups.

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