Measuring the impact of research in improving outcomes and value

Reflections from Academic Health Sciences Centres in the UK

Prof John Moxham, Tuesday 27 November 2018
What do we mean by value and why is it so important?

\[
\text{Value} = \frac{\text{Outcomes that matter to patients, service users and carers}}{\text{Costs of achieving those outcomes Over the complete pathway of care}}
\]
Our mission – translate cutting-edge research and innovation into patient care, delivering **improved outcomes for patients** locally and globally.

King's Health Partners

We are...

1 of 6 Academic Health Science Centres in the UK

3 NHS Foundation Trusts
- Guy's and St Thomas'
- King's College Hospital
- South London and Maudsley

1 world-leading university for health, research and education

40,000 staff

30,000 students
Delivered through clinical academic groups – focus on integrating mind and body and implementing value based healthcare.
Dissolving the artificial boundaries between research, practice, teaching and training

“Our clinical academic group has dissolved artificial boundaries between research, practice, teaching and training, and between the NHS and academia. Our clinicians teach, our researchers practise and our teachers research.”

“This structure is enabling us to attain our key strategic goal of assuring the translation of research findings related to medicines into practice as quickly as possible, which ultimately benefits our patients who safely receive the right medicine, in the right formulation at the right time.”

Progress report from Pharmaceutical Sciences CAG Leader to monthly meeting of all CAGs with the Executive Director of King’s Health Partners (13 November 2018)
For research and innovation to have maximum impact on health outcomes, we need to have academic healthcare systems.

- Innovative ideas and discoveries can be put into practice to improve patient care irrespective of where in the continuum they arise.
- Innovative ideas and discoveries can be exported to other institutions/systems, and similarly the innovations of others can be imported into the continuum.

(modified from Dzau et al., Lancet 2010, 375:949:53)
Focusing on value ensures that we deliver outcomes that matter to patients and achieve a sustainable healthcare system for all.

Value = Outcomes that matter to patients, service users and carers

Costs of achieving those outcomes

Over the complete pathway of care
Past research within King’s Health Partners has demonstrated that for patients admitted with exacerbation of chronic obstructive pulmonary disease (COPD), early post-discharge outpatient pulmonary rehabilitation improved exercise capacity and reduced readmissions. (Man WD, Polkey MI, Donaldson N, Gray BJ, Moxham J., MBJ 2004; Seymour JM et al, Thorax 2010).

The KHP Integrated Respiratory Team, led by a KHP respiratory consultant and two local GP respiratory leads increased pulmonary rehabilitation referrals by 50% - most referrals nationally.

This has led to reduced admissions (34%) and length of stay (17%) and substantial net savings.
Three Dimensions for Diabetes (3DFD) – Diabetes and Obesity CAG

- Three Dimensions for Diabetes is a patient centred multidisciplinary service integrating psychological and social care with diabetes care for complex multi-morbidity patients at high risk of diabetic complications.
- 1,020 patients referred into the programme.
- On referral, mean Hb A1c of 96mmol/mol (10.9% DCCT). Intervention reduced HbA1c by 16 mmol/mol, significantly reducing risk of complications.
- 60% of patients received a new diagnosis of a psychiatric disorder (60% depression).
- Reduced A&E attendances by 45%, hospital admission by 43% and bed days by 22%. Reduced incidence of depression, and increased patient satisfaction.
- Service cost £190k but saved £225k in one year. Over 5 years, predicted net savings £2,425k.

To improve value we must drive research and innovation that demonstrate improvement in outcomes that matter to patients.