Translating Biomedical Innovations: the collaborative challenge

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Collaborative Partnerships in Health, Medicine & Social Care Conference: Lancaster
18th September 2012
Life-Science research and innovation: a global UK strength!

- Public Sector Investment in life-sciences & high international competitive quality
- Health related charity investment
- Established industry & SME R&D investment
- NHS (especially NIHR)

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Principle sources of invention and innovation

- Universities
- Research Institutes
- Industry (especially SMEs)
- NHS / Hospitals
Complimentary strengths across the innovation pathway

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<th>Latest Science &amp; Tech</th>
<th>Perceive Application</th>
<th>Translational Capacity</th>
<th>Development Capacity</th>
<th>Investment Capacity</th>
<th>Speed of Action</th>
<th>Patient access &amp; understanding</th>
<th>Global Market knowledge</th>
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<tbody>
<tr>
<td>Universities &amp; Institutes</td>
<td>Y</td>
<td>?</td>
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Self-evident need to collaborate!!
Changing drivers for innovation

• Unmet patient need & emerging threats to health
• Demographics & rising expectations
• Advances in Science & Technology
• Increasing need for cost efficiency & value for money
• Perceived benefit & improved societal / global outcome

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Additional classes of valuable innovations

- Therapies
- Diagnostics
- Devices
- Medical Technologies
- ‘E’ & ‘Tele’ health applications
- Communication & monitoring tools
- Assisted Living / QOL aids
- Preventive & compliance aids
- Data analysis & exploitation
HMG recognises the strategic importance of this sector to the UK economy!

• New Life-Science strategy & plans (December 2011)
• Uptake & Adoption of Innovation in the NHS (Nicholson review / implementation ongoing)
• NIHR investment in Clinical Trials infrastructure, TRPs and E-Health resources
• Introduction of new interventions across the innovation pathway e.g.
  – R&D tax credits
  – Biomedical Catalyst
  – Patent Box

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Encouraging Industry to collaborate

• Be simple and clear about what is on offer
• Offer a ‘one stop shop’ if possible
• Appreciate that industry timescales are often tight
• Understand the companies strategy and priorities
• Achieve a common perception of outcome & value
• Transparent costs
• Invest in personal relationships
• Excellent project management
Overcoming the barriers to collaboration

• Avoiding traditional suspicions & prejudices
• Appreciating the issues caused by short-term pressures
• Silo thinking & decision making
• Developing a common perception of value & attrition
• Real risk / value sharing
• Clear mechanisms for IP attribution

Actively encourage interchange to broaden careers & optimise education & training
Biomedical Catalyst

• Major new initiative to accelerate the translation of best biomedical innovations from academic or commercial sector through to investable companies
• £180m funding jointly administered by the TSB and MRC
• Aims to “target the valley of death” experienced at the earlier stages of translation
• 3 broad classes of award ‘Feasibility’, ‘Early-Stage’, ‘Late-Stage’
• Want to encourage widest range of biomedical innovations
• Syndication / Risk sharing with private investors encouraged
• Partnership with NIHR / NOCRI infrastructure & research investments also strongly encouraged