## Dr Charlotte Hopkins
Whipps Cross University Hospital, London

<table>
<thead>
<tr>
<th>Speaker Name</th>
<th>Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr Charlotte Hopkins</td>
<td>Dr Hopkins received a Gilead fellowship in 2012 for a service improvement project for the follow up of long term stable patients</td>
</tr>
</tbody>
</table>

### COMPETING INTEREST OF FINANCIAL VALUE > £1,000:

| Date      | November 2013 |
Measuring and improving the quality of care
Dr Charlotte Hopkins – UCLP and HIV Consultant
This session

‘You have two jobs the one you do and the one where you improve it’ Paul Batalden, Dartmouth USA

‘The ability to perceive or think differently is more important than the knowledge gained’ David Bohm

- Introduce some approaches to quality, measurement and value
- Quality improvement
- Next steps
What is quality?

Maxwell and Donabedian 1992 - better health outcomes, access to all, lowest possible cost with the greatest health improvements.

Ovretveit 1996 - gives people what they need, as well as what they want, and does so at the lowest cost.

IOM - ‘The degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge.’

Safety, effectiveness, patient centeredness, timeliness, efficiency and equity’
Quality needs to be defined in a way most relevant to each team

Quality = \text{Clinical Outcomes} + \text{PROMS} + \text{Patient Experience}

Determine and measure the most important measures of quality

- Within each care setting
- Over the whole pathway of care
Value-based health care: an emerging new paradigm

Outcomes over the cycle of care is at the heart of value-based health care

\[
\text{Value} = \frac{\text{Outcomes (Clinical, PROMs, Experience)}}{\text{Cost to provide care}}
\]

Source: Adapted from Institute of Strategy and Competitiveness, Harvard Business School; BCG analysis
### “Whole pathway” approach to Quality & Value—Stroke example

<table>
<thead>
<tr>
<th>Element of pathway</th>
<th>Whole-pathway outcome measure</th>
</tr>
</thead>
</table>
| 1. Stroke education and public awareness | • Population awareness of risk factors  
• Population awareness of FAST |
| 2. Primary prevention and population risk factors | • Population incidence of stroke |
| 3. Stroke and TIA hospital admissions (acute management and treatment) | • Acute mortality  
• %discharges direct to home from (H)ASU  
• Readmissions |
| 4. Rehabilitation/ access to services/ PROMS/ Mortality | • Functional status  
➢ Return to pre-stroke life role  
➢ SF36 |
| 5. Follow-up/ secondary prevention and hospital readmissions | • Secondary incidence  
• Population mortality |
| 6. Measurement of patient experience | • Was care well-connected?  
• Did you get understand care plan & have chance to make choices? |

4 questions leaders should ask

- Do you know how good you are?
- Do you know where you stand relative to the best?
- Do you know/understand where variation exists in your organisation?
- Do you know your rate of improvement over time?

Maureen Bisognano President and CEO of IHI
4 habits of high value health care organisations

- Specification and planning
- Infrastructure design – develop microsystems
- Measurement and oversight
- Self study

Bohmer R, Four Habits of High-Value Healthcare Organisations NEJM 2011
Next Stage Review in 2008 defined quality for NHS, but major shortcomings in how we currently measure quality

- Compliance/defect focused
- Process, not outcome focused
- Professionally-focused, not patient-focused
- Episodic and fragmented
Right measures, measured right

1. Fuel flow
   - Speed
   - Climb
   - Direction
   - Oil pressure

2. Fuel flow
   - Speed
   - Climb
   - Direction
   - Oil pressure

3. Pilot’s shoe size
   - Number of in-flight movies watched
   - Average number of toilet flushes per person
   - Number of clouds passed
   - Number of passengers with brown hair

4. FULL/EMPTY
   - Faster/slower than yesterday
   - LEFT/RIGHT
   - Too much/too little
   - Higher/lower than last week

http://inspguilfoyle.wordpress.com/2013/10/12/right-measures-measured-right/
And measurement on its own isn’t enough...
<table>
<thead>
<tr>
<th>National</th>
<th>Local – locally/trust set priorities</th>
<th>Clinic level – you set your priorities</th>
</tr>
</thead>
<tbody>
<tr>
<td>CQUINS Audit programmes</td>
<td>SUI Local audit programme Mandatory training rates</td>
<td>Local audit programme</td>
</tr>
<tr>
<td>Patient safety thermometer Never events MRSA/CDIFF</td>
<td>Complaints 4 hr A&amp;E waits Theatre utilisation time</td>
<td>Clinic numbers, finishing times</td>
</tr>
<tr>
<td>Friends and family test NHS staff survey</td>
<td>DNA OP rates</td>
<td>Patient survey</td>
</tr>
</tbody>
</table>
Value score cards

- Co-create with patients, clinicians and commissioners
- One view offers a few quality and resource metrics
- Shared set of goals and definitions
- Aligns stakeholders

Diagram:

- Clinical outcomes
- Resources
- PREMS
- PROMS
Example view from a value scorecard
Quality improvement in healthcare

QI is an approach to the analysis of performance and systematic efforts to improve it with improved health outcomes.

Real-time, real-world work undertaken by teams who deliver services Trisha Greenhalgh
**Background**

**Early 1950’s**
Americans who took the messages of quality to Japan (Deming, Juran)

**Late 1950’s**
Japanese who developed new concepts in response to the Americans (Ishikawa)

**1970’s-1980’s**
Western gurus who followed the Japanese industrial success (Crosby)
Why is it important?

Keogh

Ambition 2
Using data in the pursuit of quality improvement

Berwick

Transparency of data

Continual learning and improvement

Keogh Mortality review – NHS choices

A Promise to learn – a commitment to act: improving the safety of patients in England Don Berwick
IHI model for improvement

“Every system is perfectly designed to get the results it gets”

www.ihi.org
QI is about change

“All improvement will require change, but not all change will result in improvement”
AIM: To halve (50% reduction) avoidable cardiac arrests by 2012

Prevention: identification of at-risk patients
Early detection of deterioration and initial assessment
Rapid communication / referral
Prompt, definitive assessment and management plan
Timely treatment and/or transfer
Continuing care
Deteriorating patient initiative as an example

**AIM:** To halve (50% reduction) avoidable cardiac arrests by 2012

**MEASURES:** Reliable recording of vital signs

**CHANGES:** NEWS chart, SBAR, TEPs and CCOT

1. Reliable recording of vital signs
2. Early identification of deterioration (timely referral)
3. Effective communication of deterioration (e.g., SBAR)
4. Escalation to higher level (timely response, timely transfer)
5. Treatment Escalation Plans

Plan

Act

Do

Study
Process measures

Vital signs recording - randomly sampled patients: Trust: The Original 6 UCLP Trusts

Use of structured communication, i.e. SBAR: Trust: The Original 6 UCLP Trusts

Timeliness of referral: Trust: The Original 6 UCLP Trusts

Vital signs recording - deteriorating patients: Trust: The Original 6 UCLP Trusts

Timely response to referral: Trust: The Original 6 UCLP Trusts

Timely transfer to critical care: Trust: The Original 6 UCLP Trusts
Arrests 43% down from last 9 months of 2012 to first 9 months of 2013

\[ p = 0.008 \]
QI data

- Data for improvement
- Not judgement
- Not comparison
- Not research
Improvement as an academic discipline

The Science of Improvement

Donald M. Berwick, MD, MPP, FRCP

In the early 1890s, Dr William Halsted developed radical mastectomy for breast cancer. Surgeons performed the Halsted procedure for more than 80 years even though there was little systematic evidence for its success. Then a new breed of scholars subjected the process to strained, progressive, and controversial scrutiny. They explored the efficacy of surgical practice—sometimes even to the point of misleading—of Halsted's technique.

Recent controversy has centered on whether Halsted's procedure was effective. The question is not whether radical mastectomy is a good or bad idea, but rather whether it is the best choice for breast cancer surgery. This is a critical issue, as the introduction of new techniques such as lumpectomy has dramatically changed the treatment of breast cancer.

Academic medicine has a major opportunity to support the redesign of health care systems; it ought to bear part of the burden for accelerating the pace, confidence, and persuasiveness of that change. Health care researchers who believe that their main role is to ride the brakes on change—to weigh evidence with impoverished tools, ill-fit for use—are not being as helpful as they need to be.
Quality improvement research: increasingly publishable in the best journals

An Intervention to Decrease Catheter-Related Bloodstream Infections in the ICU

Peter Pronovost, M.D., Ph.D., Dale Needham, M.D., Ph.D., Sean Berenholtz, M.D., David Sinopoli, M.P.H., M.B.A., Haitao Chu, M.D., Ph.D., Sara Cosgrove, M.D., Bryan Sexton, Ph.D., Robert Hyzy, M.D., Robert Welsh, M.D., Gary Roth, M.D., Joseph Bander, M.D., John Kepros, M.D., and Christine Goeschel, R.N., M.P.A.
Difference between QI and Audit

“When you have 2 data points it is very likely one will be different from the other” Edward Deming

• 2 data points does not give sufficient information about the impact of a change

• Need to establish a baseline and then measure little and often to really understand what is happening making small incremental changes (PDSA cycles) to make the desired improvement happen and embed
## Difference between audit and QI

<table>
<thead>
<tr>
<th></th>
<th>Audit</th>
<th>Quality Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data frequency</td>
<td>Snap shot</td>
<td>Frequent and on-going</td>
</tr>
<tr>
<td>Does it change practice?</td>
<td>Rarely</td>
<td>Yes – it is inherent for change within its methodology</td>
</tr>
<tr>
<td>Does it tell a story?</td>
<td>Infrequently no</td>
<td>Yes over time</td>
</tr>
<tr>
<td>Does it tell you how good you are?</td>
<td>Yes – compares performance against a standard at one time point</td>
<td>Yes – baseline measurement informs you Continual informs whether improving or not</td>
</tr>
</tbody>
</table>
Useful resources
Next steps

Nationally

- Develop a national QI programme – building on existing audit?
- National value scorecard? – value based commissioning
- PROMS/PREMS toolkit

Locally

- QI programme for trainees?
- Local quality board?
BHIVA project to develop patient-reported measures of care quality (PROMs/PREMs)

Engagement workshop

8:00-8:55 am, Friday 15 November
Henry Moore Room, 4th Floor
QEII Conference Centre
Please come and let us hear your views
Charlotte.hopkins@uclpartners.com

@charlottehopk1n