Using QI tools: Action Effect Diagrams

Tom Woodcock
Learning Objectives

• Understand how to apply Action Effect Diagrams in practice
• Understand the benefits of using Action Effect Diagrams
• Understand how Action Effect Diagrams fit with other Quality Improvement methods
To reach a healthy weight by October 2018

Net calories

Daily Intake

Reduce alcohol intake

Drink water instead of alcohol

Energy consumption

HOW?

WHY?
In groups…

Think of additional factors that will help Bob achieve his aim.
- What else will help him reduce his calorie intake?
- What will help increase his calories out?
- Make each factor clear and explicit
- Join the factors to the things they will help with: cause and effect
Bob’s Action Effect Diagram

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- Eat Less
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Energy consumption

Exercise

- Start walking
- Cycle to work

Track calories

Adhere to 5 a day

Drink water instead of alcohol
Action Effect Diagrams

Communicate programme theory:

• an overall aim

• potential intervention(s) to be tested

• evidenced or hypothesised cause and effect relationships, linking intervention(s) to the aim

• measure concepts linked to the cause/effect chains
To increase patient and staff confidence in the quality* of care for patients with hand/wrist fractures at ICHT

*quality: timely, efficient, equitable, safe, effective, patient-centred

1. Avoidable complications
2. Patient experience
3. Hand therapy satisfaction
4. Time to expert review
5. Time to treatment
6. DNA rate
7. Complaints / Compliments
8. (Balancing) Number appointments /to discharge
9. (Balancing) Patient triaged to the wrong pathway

Aim

1. Appropriate initial assessment of patients follow up requirements following wrist or hand fracture presentation to ED/UCC
2. Confidence in referral of patient care from ED to expert care (including information flow)
3. Reliable point of contact for patients and clear guidance on care expectations and self management
4. Timely and expert review [within 72 hours] to inform care plan and individual patient needs
5. Timely treatment [within 2 weeks] for surgery or therapy
6. Regular review and supporting patients through ongoing care and follow-up support

Primary drivers

Secondary drivers

Irritating points

Ideas / Actions

- Define educational needs
- Deliver educational / training sessions on clinical Ax / Mx
- Deliver education on VFC pathway / processes to A&E staff
- Utilise and evaluate software tool (followup.clinic) for patient referrals
- Develop website to provide staff education and patient information
- Define the system processes of the VFC
- Define and validate decision making process / pathways from VFC
- Educate other staff in decision making process / pathways from VFC
- Define / collect / analyse / disseminate measures of success
- Develop patient information material
- Identify delivery of patient information

Define VFC concept

Roll out single pathway for closed hand / wrist injuries to VFC

Define pathway from VFC to each treatment option (discharge / hand clinic / hand therapy)

Provide patient information to be delivered across pathway

Ensure sustainability of ongoing care and pathway

Provide clear guidance on pathway and contact points to patients’
**NIHR CLAHRC Northwest London**

**Action effect Diagram - Contd.**

*Breaking down the Problem down - PDSAs*

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### Interventions

- Develop educational material
- Deliver face to face training
- Evaluate effectiveness of FUDC
- Demonstrate FUDC tool
- Define clinical actions of VFC, including staff roles and timing
- Define administrative actions of VFC, including staff roles and timing
- Identify governance around VFC
- Define clinical measures of success
- Develop processes of data collection and reporting
- Define and collect measures of patient experience and satisfaction
- Define and collect measures of staff experience and satisfaction

- Poster on casting / positioning
- Signpost to material on website
- Test methods of collecting clinical data
- Develop SOP for collecting clinical data
- Identify systems already in place that we can use e.g. FFT / Meridian
- Define time frames to capture patient satisfaction / experience
- Define method of capturing patient satisfaction / experience
- Develop questionnaire of patient satisfaction / experience – co-design focus group
- Define time frame to capture staff satisfaction / experience
- Develop questionnaire of staff satisfaction / experience

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Cycle to work
In groups…

Think of measures that will help Bob achieve his aim.

- Write a numbered list of measures on the bottom left
- Annotate factors to indicate measures of that factor
- Include process, outcome and balancing measures. Where do they go on the diagram?
Bob’s Action Effect Diagram

To reach a healthy weight by October 2018

- Energy consumption
  - Daily calorie count
  - Daily exercise calorie count

Net calories
- Number of headaches per week
- Time between sick days

- Exercise
  - Daily exercise calorie count

- Daily Intake
  - Eat Less
  - Reduce alcohol intake
  - Substitute for low calorie items

- Track calories
- Adhere to 5 a day
- Drink water instead of alcohol
- Start walking
- Cycle to work

- Number of fruits and vegetables eaten per day
- Number of units of alcohol per week
- Daily number of steps walked measured using pedometer
- Time spent cycling per week

Weight per week
Waist circumference per week
BMI per week
Types of Measures

- **Outcome measures** reflect the impact on the patient and the system and shows the end result of your improvement work.

- **Process measures** reflect the way your systems and processes work to deliver the outcome you want.

- **Balancing measures** reflect unintended and/or wider consequences of the change (which may be positive or negative).
Benefits of the AED in Quality Improvement

• Stakeholder engagement
• Effective project planning
• High-quality measurement and evaluation
• Clarity around causality
• Local improvement linked to system priorities and evidenced measures
• Boost for sustainability and spread
Applying the AED in practice

- Develop an AED as a team – involve people!
- Draw on relevant
  - research evidence
  - data & measures
- Revisit and update your AED regularly
- Part of a suite of tools: Plan-Do-Study-Act, Statistical Process Control, Process Mapping…
To enable stroke and TIA patients to manage risk factors to prevent recurrence

**StrokePREVENT**

**ACTION EFFECT DIAGRAM**

- Patient understanding of their diagnosis
- Patient understanding of reasons for their medication
- Patient confidence and motivation to apply changes to lifestyle

**Provision of diagnosis information**
- Healthcare (HCP) professional understanding of diagnosis

**HCP knowledge of medication**
- Communication of medical information at discharge
- Communication of lifestyle risk factors at discharge

**Reinforcement of medical risk factors**
- Reinforcement of lifestyle risk factors

**Person identification**
- Patient health beliefs

**Provision of preventative information**

**HCP ability**

**Patient mental state**
- Patient mood

**Healthcare service support mechanism**

**Information Sheet**

**Care Bundle** (includes pharmacy review)

**Staff education**

**Sign-posting**

**Standardised medical follow-up**

**Patient lifestyle education session**
Link with measurement
Welcome Back demo 1

Subscription ends: 31/12/2015

http://hlp.qi4u.org
Action Effect Diagram Summary

• A structured approach to improvement, technical and social functions
• Integrates with other Quality Improvement methods
• Resources available to support use (QI4U, publication, CLAHRC team)
References


• Lloyd R, Quality Health Care A Guide to Developing and Using Indicators
Assessment and development of care plan

System Entry
- Patient entry route
  - Availability
  - Accessibility
  - Choice
  - Redirection from other services

Development of Care Plan
- Initial assessment
- Appropriateness of current setting for care
- Plan for appropriate transfer destination
- Diagnostics
- Decision Making
- Patient Records of Previous System Interactions
- Documentation of Care Plan

Delivery of care
- Delivery and completion of Care Plan
- Appropriate updating of care plan
- Care plan for handover (between healthcare staff, setting transfer or system exit)
- Patient transition, communication, and transport between in-hospital wards/interfaces

Outflow from setting

Transition to new setting
- Clinical assessment / readiness for transition
- Patient plan for on-going care and transition/transport
- Downstream capacity and communication

Matching Capacity to Demand
- Ability to predict service demand (elective and emergency)
- Matching planned capacity to predicted demand
- Ability to respond to unpredicted demand
- Availability of physical resources
- Availability and skill level of human resources
- Structure and coordination of workforce

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