Measuring the value of managed health care

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Methods to measure value

- Health outcomes
- Benchmarking
- Return on investment
- Trend analysis (using moving average)
- Claims cost versus inflation over time (year to year)
- Other: Total population approach, survival analysis

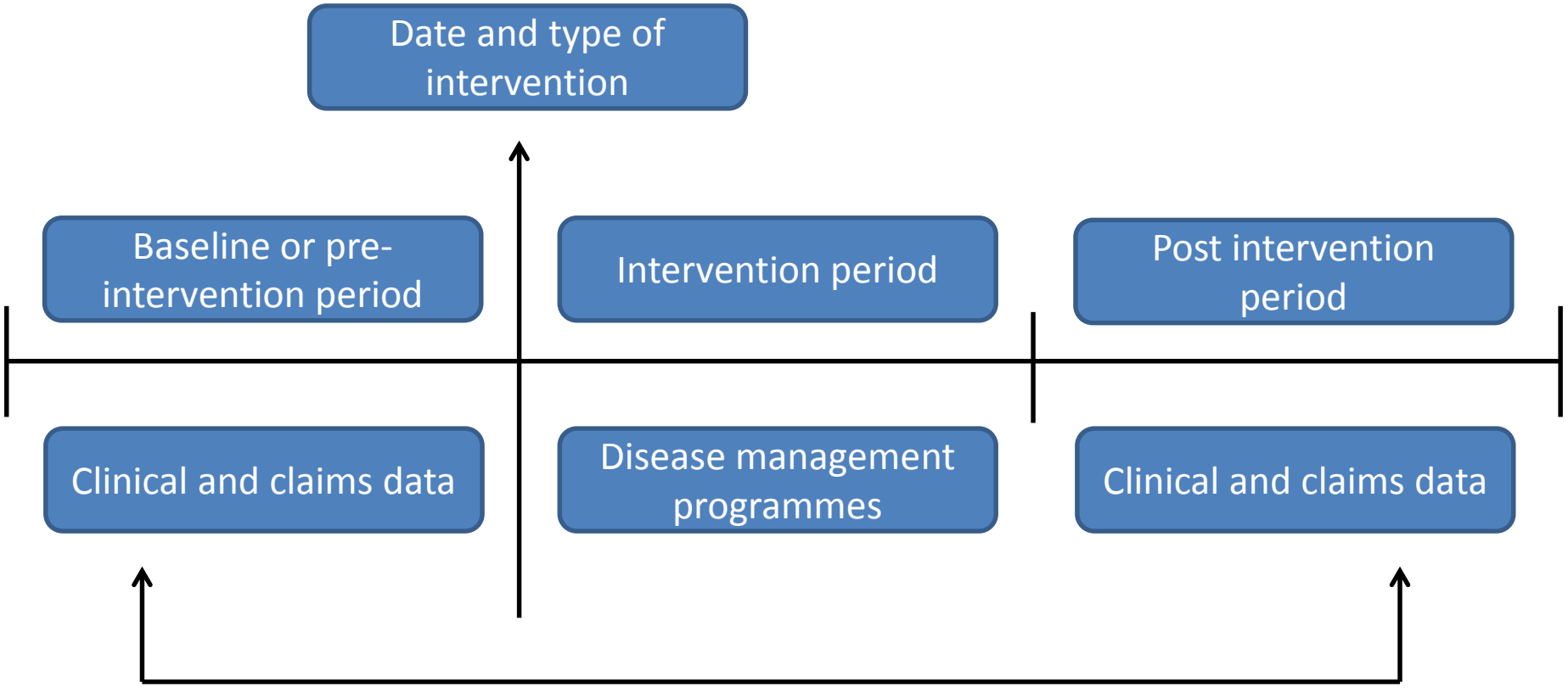
Use combination of methods

Definition: Health Outcomes

A **scientific** discipline that evaluates the effect of **health care interventions** on patient-related, if not **patient specific**, economic, clinical and humanistic outcomes

ISPOR BOOK OF TERMS

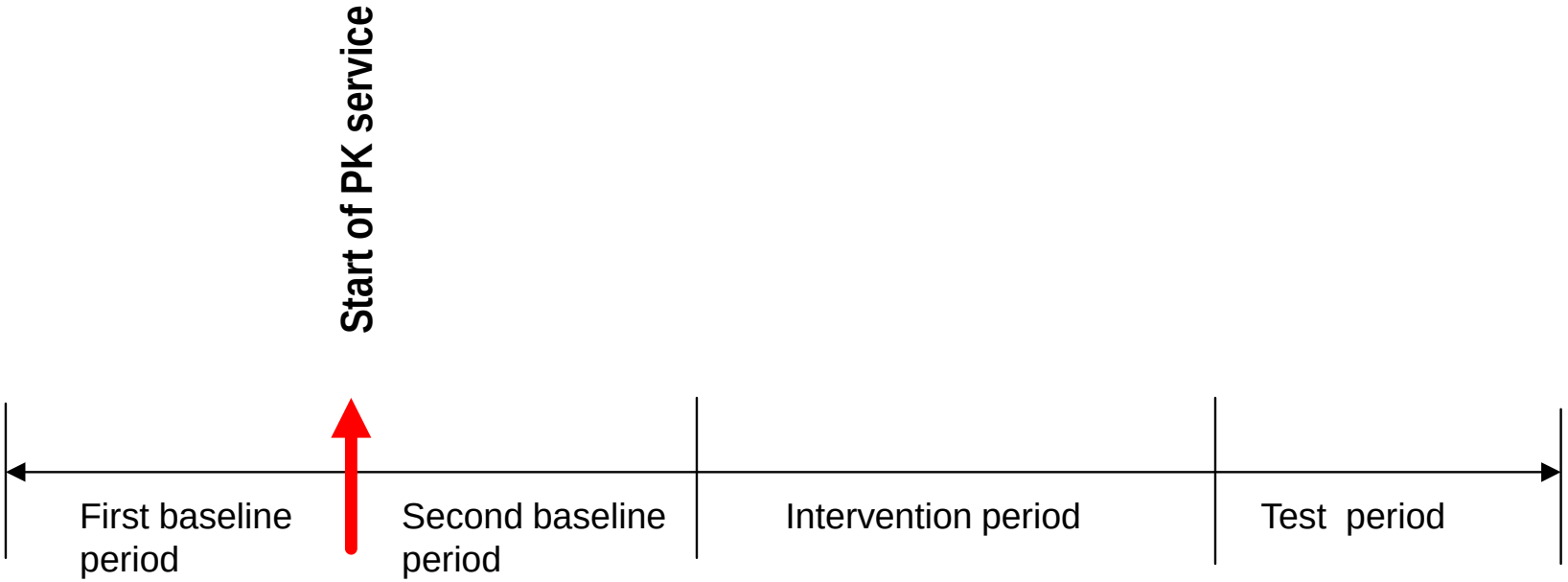
Health Outcomes Assessment



Difference = Outcome

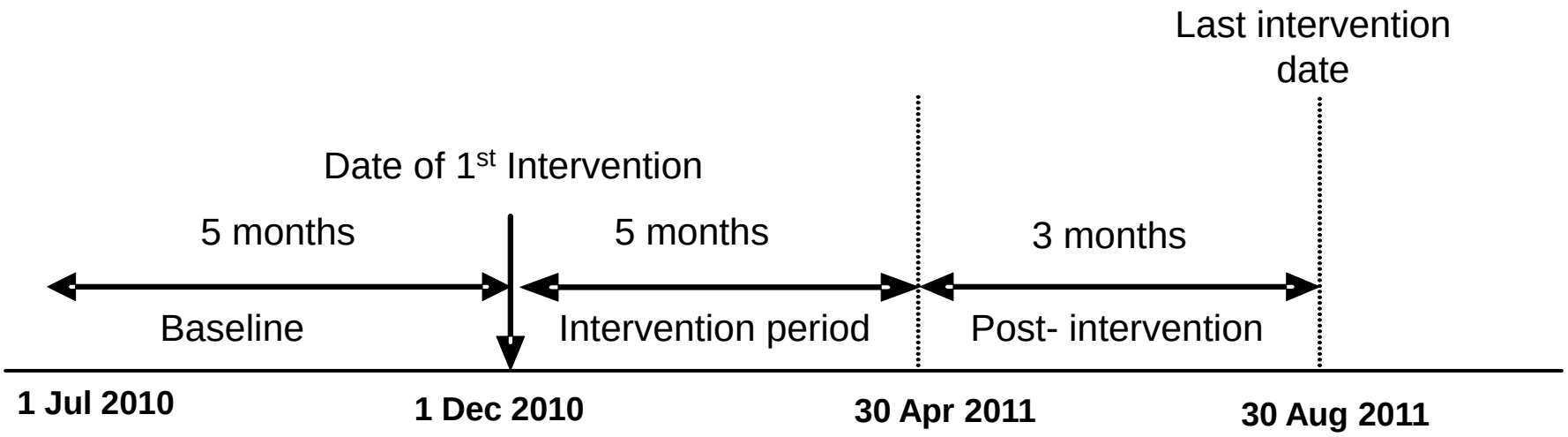
Value of managed health care

Pre-Post intervention: phenytoin

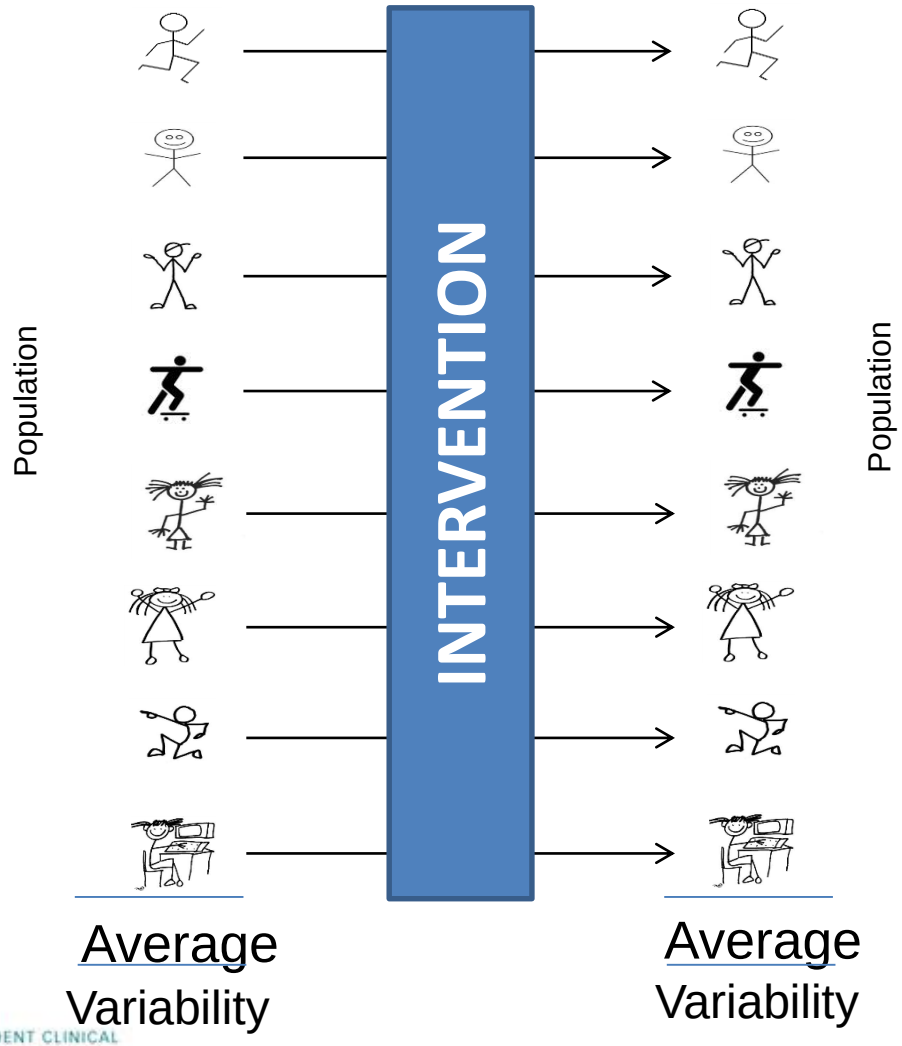


P. Valodia et al, Benefits of a clinical pharmacokinetic service in optimizing phenytoin use in the Western Cape. SAMJ.1998,88:873-875

PRE- AND POST INTERVENTION



Population vs Individual Health Outcomes Assessment



Measure Change

A

B

C

D

E

F

G

H

Asthma: Health Outcomes

Clinical

- Categorization of uncontrolled, partially control and controlled patients
- Frequency of symptoms
- Severity of symptoms
- Number of symptoms
- Number of asthma attacks
- Number of emergency room visits.
- Number of asthma related hospital days
- Number of nebulisations
- Number GP consults
- Number specialists consults
- Asthma related admissions

Economic

- Savings due to reduced hospitalizations
- Savings due to reduced emergency room visits
- Savings due to decrease hospital nebulisations
- Savings due to decrease in consultation costs
- Savings due to decrease specialist visits
- Savings due to increased productivity (less absenteeism)

Humanistic

- Improved quality of life
- Improved patient satisfaction
- Improved compliance
- Improved understanding of inhaler use
- Improved understanding of personal treatment plan
- Improved ability to use as peak flow meter
- Smoking cessation
- Avoidance of trigger factors
- Increase use of a spacer device when required

Challenges with measuring health outcomes

- Definition of health outcomes
- Careful planning of data collection
- Availability of good baseline information
- Selection bias
- Missing data points
- Validation of ICD10 and CPT codes
- Matching of control groups
- Regression to the mean
- Clinical and statistical differences
- Inter- and intra-scheme variability

Challenges

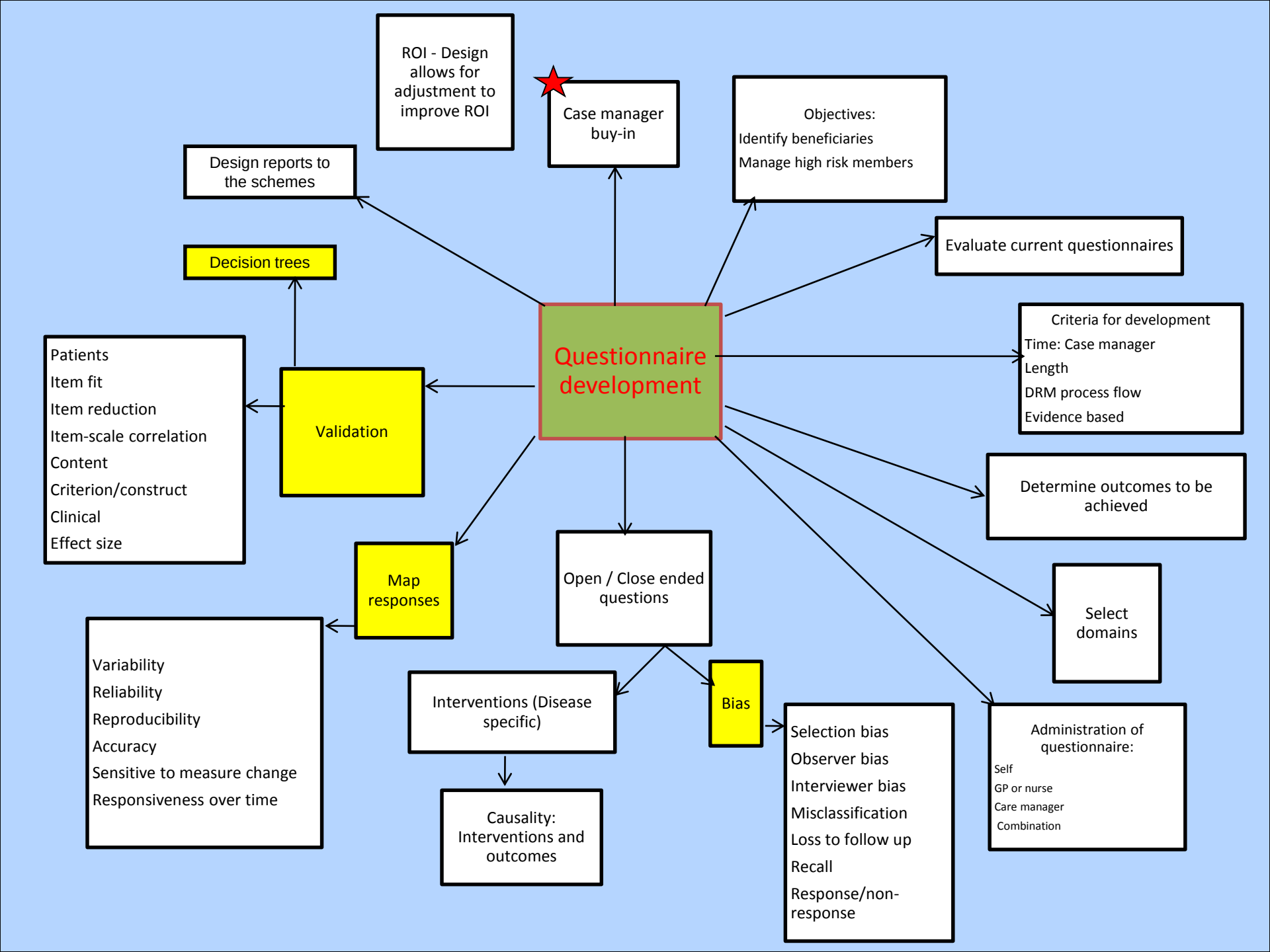
- A priori specification of confounding variables
- Interpretation – denominator effect, RTTM
- Development of questionnaires sensitive to changes over time
- Integration and automation of all systems
- Development of intelligent health systems
- Disease specific clinical measurement
- Not all information is extractable
- Develop impactibility models

Project phases

- Phase 1: report on claims data
- Phase 2: report on clinical data
- Phase 3: development of measurement tools (questionnaires) for health outcomes reporting
- Phase 4: development of economic and probability models

Methods

- Pre –post intervention
- intervention vs control group


ROI - Design allows for adjustment to improve ROI
Case manager buy-in
Objectives:
Identify beneficiaries
Manage high risk members
Design reports to the schemes
Evaluate current questionnaires
Decision trees
Questionnaire development
Criteria for development
Time: Case manager
Length
DRM process flow
Evidence based
Patients
Item fit
Item reduction
Item-scale correlation
Content
Criterion/construct
Clinical
Effect size
Validation
Determine outcomes to be achieved
Map responses
Open / Close ended questions
Select domains
Variability
Reliability
Reproducibility
Accuracy
Sensitive to measure change
Responsiveness over time
Interventions (Disease specific)
Bias
Administration of questionnaire:
Self
GP or nurse
Care manager
Combination
Causality: Interventions and outcomes
Selection bias
Observer bias
Interviewer bias
Misclassification
Loss to follow up
Recall
Response/non-response

Way forward

- Form industry group to develop methods
- Provide guidelines to industry to measure outcomes
- Implement a phased approach