# SMART Objectives and selecting Outcome measures

Research & Evaluation team
Public Health
Hertfordshire County Council
E-mail: ph.evaluation@hertfordshire.gov.uk

# This workshop will cover:

- What Smart objectives are and how to write them
- How to link Smart objectives to your outcomes
- How to select suitable measures for your outcomes
- How to collect and record your outcome data
- Analysing your outcome data
- Reporting your results

# Planning – why, who, what, when

Why are you doing this project?

- Is there a need?
- What is the evidence for this need?
- What is the health issue?
- Prevalence of health issue?
- Is there a demographic need?

Who is your project aimed at?

- Who is your target audience?
- Who are the project stakeholders?
- What will be their involvement throughout this project?

# Planning cont.

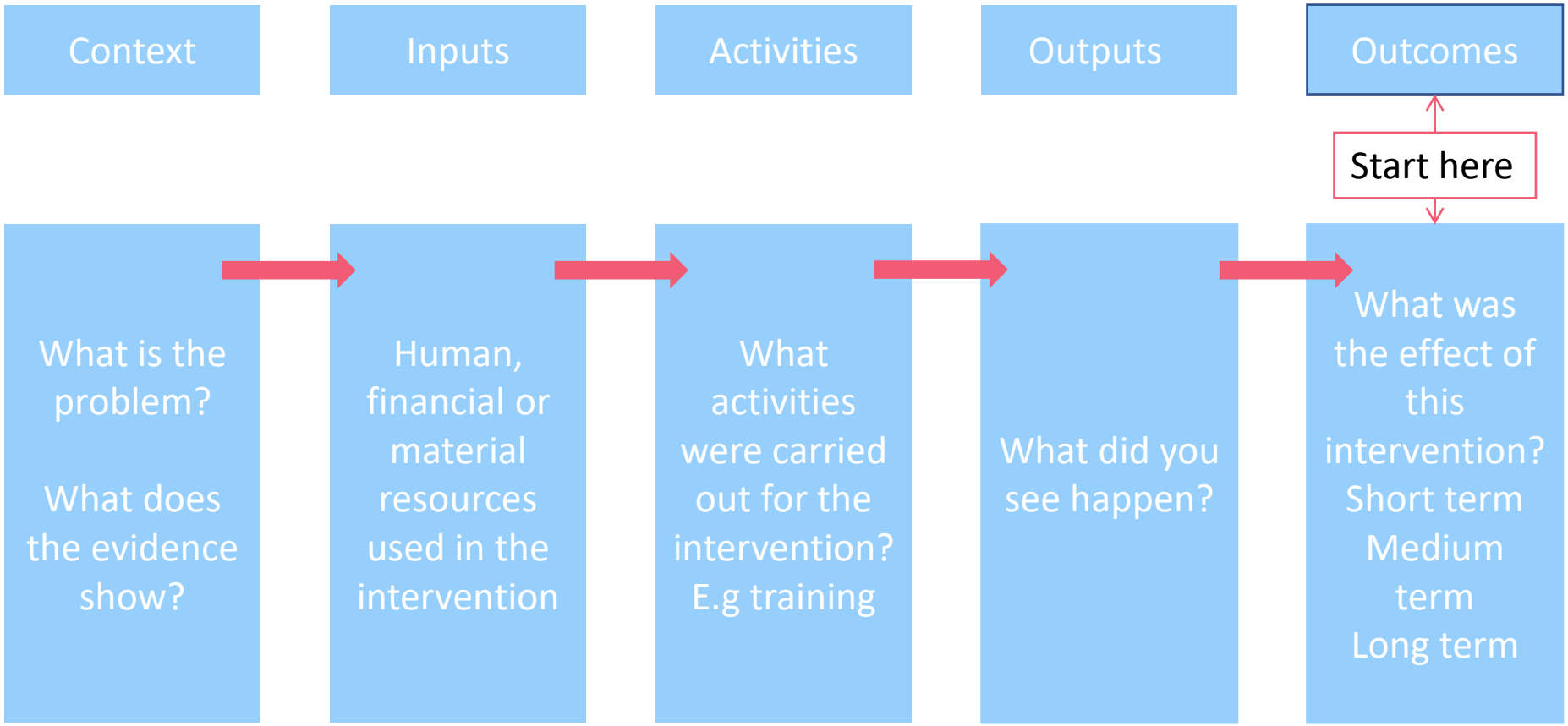
What do you hope to achieve?

- What is the project aim?
- What outcomes do you want to see?
- What will your project look like?
  - What will happen
- What evidence is there?

When will your project happen?

- When will your project start?
  - Day
  - Time
  - How long will it last?
- Where will it take place?

# Logic-Model Framework



# Objectives versus activities - recap

**Objectives state what we want to achieve**

**Activities state what we will do to meet our objective(s)**

# Aims versus objectives - recap

- Aims
  - One aim is normally sufficient
  - Describes what the project/intervention hopes to achieve
- Objectives
  - 3 to 5 objectives are recommended
  - specific
  - measureable
  - Give the criteria for deciding the outcome has been achieved
  - State the target population

# Writing objectives

- Objectives help us answer our evaluation questions and consider the intended outcomes.
- They should be SMART:
  - S – specific, significant, stretching
  - M – measurable, meaningful, motivational
  - A – agreed upon, attainable, achievable, acceptable, action-oriented
  - R – realistic, relevant, reasonable, rewarding, results-oriented
  - T – time-based, time-bound, timely, tangible, trackable

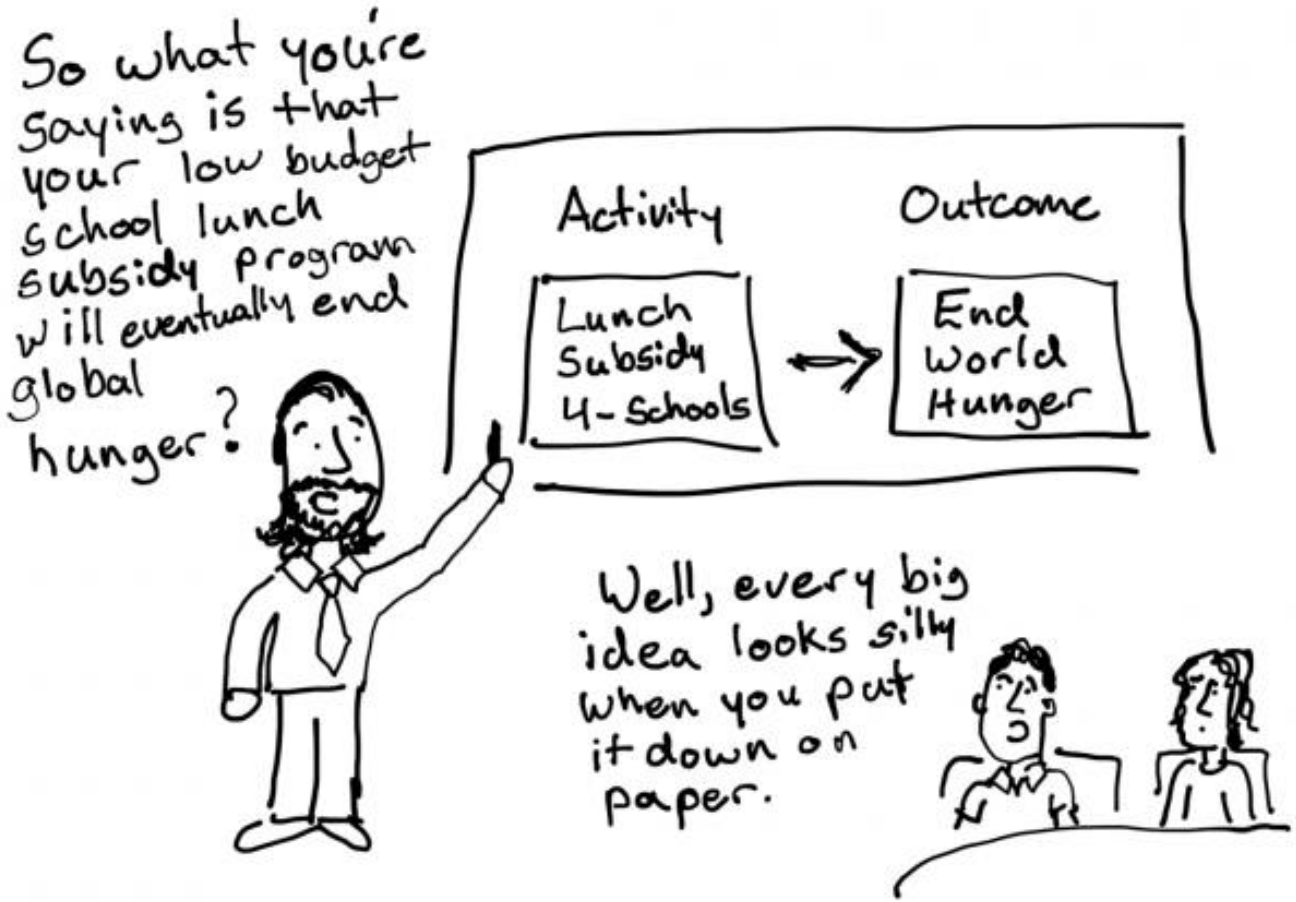
- When writing SMART objectives it is easier to use the following order:
  - M  - measureable
  - A/R – achievable/realistic
  - S – specific
  - T - timely

# Measureable

- How will you measure this objective?
- What tools could you use?
  - What have other interventions in this area used?
- Where can you find suitable measures?
- Consider
  - some measures are licenced and have an attached cost.
  - how will you collect the data?

# Achievable/Realistic

- Achievable and realistic work together
- Is your target achievable?
  - It is difficult to achieve a 100% success rate
  - How much change do you expect to see?
- What is a realistic expectation? Consider:
  - Budget
  - Time
  - Resources


So what you're saying is that your low budget school lunch subsidy program will eventually end global hunger?
Activity
Outcome
Lunch Subsidy 4-Schools
End World Hunger
Well, every big idea looks silly when you put it down on paper.
freshspectrum

# Specific

- Be clear and do not use jargon
- Does the objective mean the same to everyone involved?
- Should state
  - What
  - Why
  - Where
  - When
  - Who

# Time

- This is about setting deadlines
- Use dates or specify a set time period.
- Need a clear start and end date
  - Extending the time period makes the objective non-specific!

# SMART objective example

Over a 12 week period, 50% of the fifty adults recruited on to the weight loss programme will lose at least 5% of their body weight.

To promote and recruit children aged 11-15 onto the physical activity programme

# Quiz

Using the poll in MS Teams, decide which statements are SMART objectives and which statements are not SMART objectives

# Activities, Outputs, Outcomes and Objectives

Activities: What will the intervention do to achieve the expected outcomes?
*E.g weekly one to one sessions with a volunteer mentor*

Outputs: What was the direct result of the activities? The product (deliverable) from an intervention/service
*E.g. the number of people who attended a session*

Outcomes: The meaningful changes for the population served
*E.g. Increased self-esteem*

Objectives: A statement of what you're trying to achieve (should be SMART)
*E.g. After 12 weeks, participants' wellbeing will have improved, on average, by 5 points on the personal wellbeing scale (ONS4)*

# Matching objectives to outcomes measures

Example:

Outcome

To improve the mental wellbeing of people with mild depression by completing an 8 week art course.

Problem

Output

Activity

# Outcome measures

- Lots of measure available, need to choose one that matches the issue you are trying to change
  - Body weight
  - Physical activity
  - Mental wellbeing
  - Loneliness
  - Alcohol consumption
  - Diet
  - Smoking

# Outcome measures – mental wellbeing

- Mental wellbeing
  - (S)WEMWBS – Wellbeing
  - ONS – Subjective Wellbeing
  - GAD7 - Anxiety
  - PHQ9 – Depression
  - GHQ12 – Psychological wellbeing

- Individual development
  - EQ-5D-5L
  - SF36 or SF12
  - WHOQOL Brief
  - Self-efficacy question

- Community Development
  - Social trust question

Make sure you use all the questions in the questionnaire and do not change any of the wording otherwise the questionnaire will be invalid.

# Outcome measures – physical health

- Weight Management
  - Weight (KG)
  - BMI
  - Body Composition
  - Waist circumference
  - Fruit and vegetable consumption

- Physical Activity
  - Sport England – Short Active Lives Survey
  - Single item measure (7 day recall)
  - IPAQ – Short
  - IPAQ – E (older adults)
  - IPAQ – C (children)
  - Pedometer
  - Measures of:
    - strength
    - Balance
    - endurance

Remember to make sure that your measurement tool is suitable for your audience. For example – age appropriate

# Outcomes measures - specialist

- Loneliness
  - Campaign to end loneliness scale
  - UCLA Loneliness scale
  - Single loneliness question from Community Life Survey
- Fear of falling
  - Falls Efficacy Scale International
  - Short Falls Efficacy Scale
- Dementia
  - Range of measures but tend to be specific to certain situations
- Carers
  - Specific to the caring situation
- Children
  - UCLA Loneliness scale for children
  - Strengths & Difficulties questionnaire
- Learning difficulties
- Other specific medical conditions

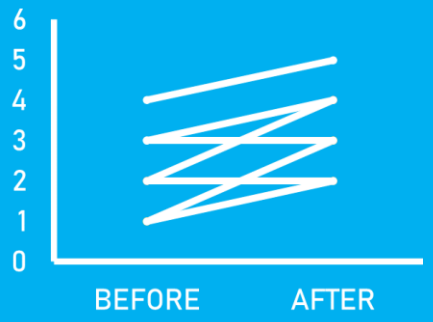
Be aware that some measures are not free to use, such as Outcome Stars. Others may ask you to seek the authors permission first.

# Data collection

Routinely collected data and bespoke data collection

Individual level data needed

Quantitative and qualitative data




Baseline data

# Data confidentiality

- Participants personal data is sensitive data.
- Make this anonymous as soon as practically possible.
- Always store in a secure location
- Check your organisation's data protection rules.
- If this is large scale project in conjunction with a university, you may need ethical approval

# When to collect data

If we do not collect outcome data before starting our intervention we have lost the chance to evaluate well!

## Baseline

- Pre-intervention outcome data
- Demographics

## Post intervention

- Immediate outcome data
- Participant feedback

## Post intervention

Follow up outcome data (e.g. 3 months after end of intervention)

This is a basic example, you can have more data collection points. This is recommended if you are carrying out a large intervention over a long period of time.

# Inputting the data for analysis

The general rule is to enter all the data for a participant in one line. Below are two examples of how you can enter the data.

| Participant ID | Gender | Age | Academic subject | Ethnicity | MH diagnosis? | **PRE** PA level | **POST** PA level | **PRE** SWEMWBS Score | **POST** SWEMWBS Score |
|---|---|---|---|---|---|---|---|---|---|
| 101 | Female | 19 | HUM | Black/Black British | No | 1 | 3 | 22.35 | 25.03 |
| 102 | Male | 21 | PAM | Asian/Asian British | Yes | 2 | 2 | 23.21 | 26.02 |
| 103 | Female | 22 | LMS | White/White British | No | 1 | 2 | 23.21 | 25.03 |
| 104 | Female | 23 | PAM | Black/Black British | No | 2 | 2 | 19.98 | 20.73 |
| 105 | Female | 19 | HUM | Black/Black British | Yes | 2 | 3 | 17.43 | 23.21 |
| 106 | Male | 19 | CS | White/White British | Yes | 3 | 3 | 22.35 | 22.35 |

The example above keeps all the information for one participant on one line. However you are not able to check for inputting errors. The example below does enable you to check for errors, however you will need a line of data for each instance of data collection.

| Participant ID | Pre or post intervention | Gender | Question 1 | Question 2 | Question 3 | Question 4 | Question 5 | Question 6 | Question 7 | Total Observed Score | Comparison to National Average | Converted score |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 101 | Pre | Female | 4 | 4 | 3 | 3 | 4 | 4 | 3 | 25 | Average | 22.35 |
| 102 | Pre | Male | 3 | 4 | 4 | 4 | 3 | 4 | 4 | 26 | Average | 23.21 |
| 101 | Post | Female | 4 | 4 | 4 | 4 | 5 | 3 | 4 | 28 | Good | 25.03 |
| 102 | Post | Male | 4 | 5 | 4 | 4 | 4 | 3 | 5 | 29 | Excellent | 26.02 |

# How not to record data

| | Total scores |
|---|---|
| Week 1 | 38 |
| Week 2 | 43 |
| Week 3 | 54 |
| Week 4 | 39 |
| Week 5 | 43 |
| Week 6 | 45 |
| Week 7 | 51 |
| Week 8 | 52 |
| Week 9 | 48 |
| Week 10 | 53 |

This is aggregated data, and cannot be analysed meaningfully

| | Start date | end date | Start score | End score | Completed? |
|---|---|---|---|---|---|
| Participant 1 | 25-Jan-22 | 30th March 2022 | 35 | 45 | Yes |
| Participant 2 | 22nd Jan | 19th March 22 | Thirty six | Forty five | Y |
| Participant 3 | 20th January 2022 | 25-Mar-22 | 39 | 44 | No |
| Participant 4 | 19-Jan-22 | 29-Mar-22 | 38 | 43 | Y |
| Participant 5 | 21st January | 31st March 22 | Thirty five | 43 | Y |
| Participant 6 | 25-Jan-22 | 30th March 2022 | Thirty six | Forty six | N |
| Participant 7 | 22nd Jan | 19th March 22 | 35 | Fifty | Yes |
| Participant 8 | 20th January 2022 | 25-Mar-22 | 36 | 51 | Yes |
| Participant 9 | 19-Jan-22 | 29-Mar-22 | Thirty nine | Forty five | N |
| Participant 10 | 21st January | 31st March 22 | Thirty eight | Forty eight | Y |
| Participant 11 | 18-Jan-22 | 25th Mar 22 | Forty | 47 | Y |
| Participant 12 | 20-Jan-22 | 31-Mar-22 | 39 | 46 | Yes |

This data is not recorded consistently and requires ‘cleaning’

# Example of data analysis

Objective – to increase social trust in participants by at least 30% by the end of the project

| ID | Name | Pre Project Score |
|---|---|---|
| 1 | Participant 1 | 3 |
| 2 | Participant 2 | 4 |
| 3 | Participant 3 | 6 |
| 4 | Participant 4 | 4 |
| 5 | Participant 5 | 2 |
| 6 | Participant 6 | 5 |
| 7 | Participant 7 | 1 |
| 8 | Participant 8 | 3 |
| 9 | Participant 9 | 7 |
| 10 | Participant 10 | 6 |
| 11 | Participant 11 | 3 |
| 12 | Participant 12 | 5 |
| | Total score | 49 |
| | Mean score | 4.1 |

| ID | Name | Post Project Score |
|---|---|---|
| 1 | Participant 1 | 6 |
| 2 | Participant 2 | 5 |
| 3 | Participant 3 | 7 |
| 4 | Participant 4 | 5 |
| 5 | Participant 5 | 8 |
| 6 | Participant 6 | 5 |
| 7 | Participant 7 | 7 |
| 8 | Participant 8 | 4 |
| 9 | Participant 9 | 6 |
| 10 | Participant 10 | 8 |
| 11 | Participant 11 | 5 |
| 12 | Participant 12 | 7 |
| | Total score | 73 |
| | Mean score | 6.1 |

*Social trust question*

Generally speaking, would you say that most people can be trusted, or that you can't be too careful in dealing with people? Please give a score of 0 to 10, where 0 means you can't be too careful and 10 means that most people can be trusted.

| Can't be too careful | | | | | | | | | | Most people can be trusted |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

| | |
|---|---|
| Mean score increase | 2.0 |
| Percent increase | 49% |

<u>Mean score</u>
= total score divided by total number of participants

# Reporting Results – Outcomes - Example

Changes in wellbeing (as captured by the SWEMWBS) were captured when participants started the sessions and again after 12 weeks. The scores for this tool were transformed in accordance with scoring protocol, with the mean (average) score before the students started the sessions was 26.42. After the 12 weeks, the mean score of the group had increased to 31.55. This improvement in scores suggest that the students had an improvement in subjective wellbeing after completing the 12 weeks of exercise. The majority of the students had improved SWEMWBS scores following the sessions:

- 82% of students had an increase in SWEMWBS score
- 12% of students SWEMWBS scores stayed the same
- 4% of students had a reduction in SWEMWBS score

In comparison to national figures, wellbeing scores at the start of the intervention went from average (M=26.42) to excellent (M=31.55).

Using M is the academic way, can just say average if it suits your audience better

# Output and monitoring data

- Still needs to be collected and includes:
  - Demographic data
  - Attendance rates
  - Completion rates

- Useful for:
  - Cross sectional analysis such as comparing the results of different groups of people based on certain characteristics
  - Excluding the outcome data from people who did not complete the course or withdrew from the project. This gives more accurate results.

# Questions?

# Useful links

- What works for wellbeing
- Sport England tools and resources for evaluation
- Herts Health Evidence