Modelling evaluation of a political leadership programme: behavioural change to make the case for Antimicrobial Stewardship

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Presentation Overview

◆ Overview of Antimicrobial Resistance (AMR) and Antimicrobial Stewardship (AMS)

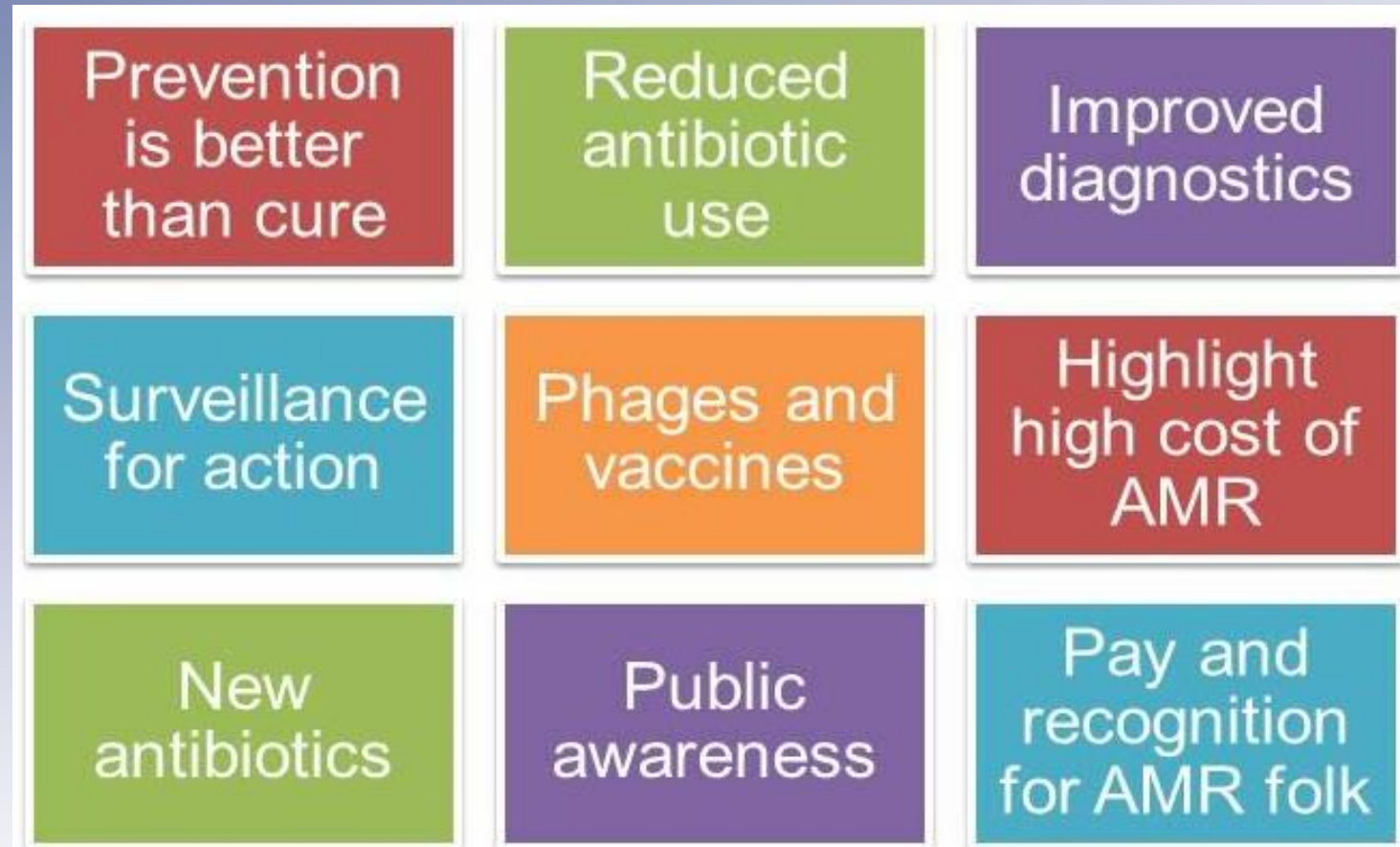◆ Development of the RCN Political Leadership Programme in AMS

◆ Evaluation

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Antimicrobial Resistance (AMR)

"…the thoughtless person playing with penicillin treatment is morally responsible for the death of the man who finally succumbs to infection with the penicillin resistant organism. I hope this evil can be averted." (Alexander Fleming, 1945)

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Antimicrobial Resistance (AMR)

◆ Increasing resistance of pathogens (bacteria, viruses, fungi) to antimicrobial drugs used against them

– Evolutionary process accelerated by the misuse and overuse of antibiotics

– Public health crisis (WHO, 2015; DOH, 2016)

– Routine procedures (eg chemotherapy, organ transplant) may once again become high risk
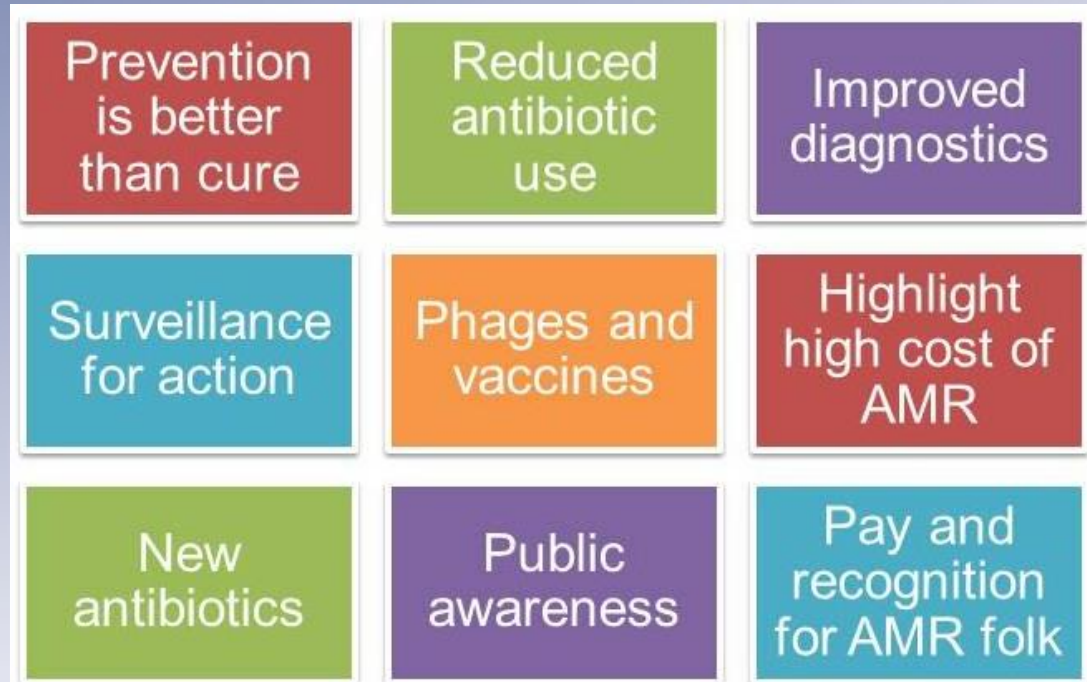
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What works against AMR

Prevention is better than cure	Reduced antibiotic use	Improved diagnostics
Surveillance for action	Phages and vaccines	Highlight high cost of AMR
New antibiotics	Public awareness	Pay and recognition for AMR folk

Based on Laxminarayan *et al. Lancet Infect Dis* 2013;13:1057-1098, and Review on AMR.

https://reflectionsipc.com/2018/04/06/nine-decades-of-antibiotics-a-story-with-two-endings/amp/?__twitter_impression=true

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What works against AMR

Prevention is better than cure	Reduced antibiotic use	Improved diagnostics
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Antimicrobial Stewardship (AMS)

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Antimicrobial Stewardship (AMS)

◆ Coordinated interplay of interventions to monitor and improve the use of antimicrobials, in order to prevent AMR (DOH, 2013; NICE, 2014)

  – WHO Global Action Plan (2015); DOH UK Five Year Antimicrobial Resistance Strategy (2013)
  – "AMR is everyone's responsibility"
  – Nurses are in a prime position to carry out AMS but appear to be reluctant leaders.

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Areas of nursing influence

- ◆ prevention and infection control
- ◆ reduced antibiotic use
- ◆ surveillance for action
- ◆ highlight cost of AMR
- ◆ public awareness
- ◆ organisational/system awareness
- ◆ inter-professional working/MDT

…there is a lot of influencing…a skill that can be developed

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RCN Political Leadership Programme (PLP) in Antimicrobial Stewardship (AMS)

◆ AMS PLP pilot in 2017

◆ Nurses, pharmacists and public health (N=9)

◆ AfC band 7/8; role which directly influences AMS

◆ Develop political and leadership skills in AMS

Model of Being Political

◆ Personal > Relationships > System > H&S Care Context

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The RCN AMS PLP learning programme

- Two-day face-to-face course including presentations and interactive sessions

- Improvement project embedded in participants' own work to apply learning

- Post-course masterclass to consolidate learning / provide opportunity for feedback

- Community of learning and practice using social media

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The RCN AMS PLP learning evaluation

◆ evaluation framework

◆ data collection

◆ analysis to assess the extent to which the programme achieved its purpose:

– Developing political 'know-how' as System Leaders

– To provide the skills and change behaviour to change behaviour

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Evaluation framework – Pathway to impact

◆ Models and theories

– Theory of change/logic model

– The Kirkpatrick Model for evaluation of learning and training interventions

– The Behaviour Change Wheel (Michie, S. et al, 2011)

http://www.kirkpatrickpartners.com/Our-Philosophy/The-New-World-Kirkpatrick-Model

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3096582/

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Modelling impact of a change project (logic model)

Impact	Indicators
Output *(which enables)*	•
Business change *(which creates)*	•
Outcomes *(which result in)*	•
Benefits *(which help achieve)*	•
Strategic Objectives	•

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The New World Kirkpatrick Model

◆ Level 1: **Reaction**
- Customer Satisfaction, Engagement, Relevance

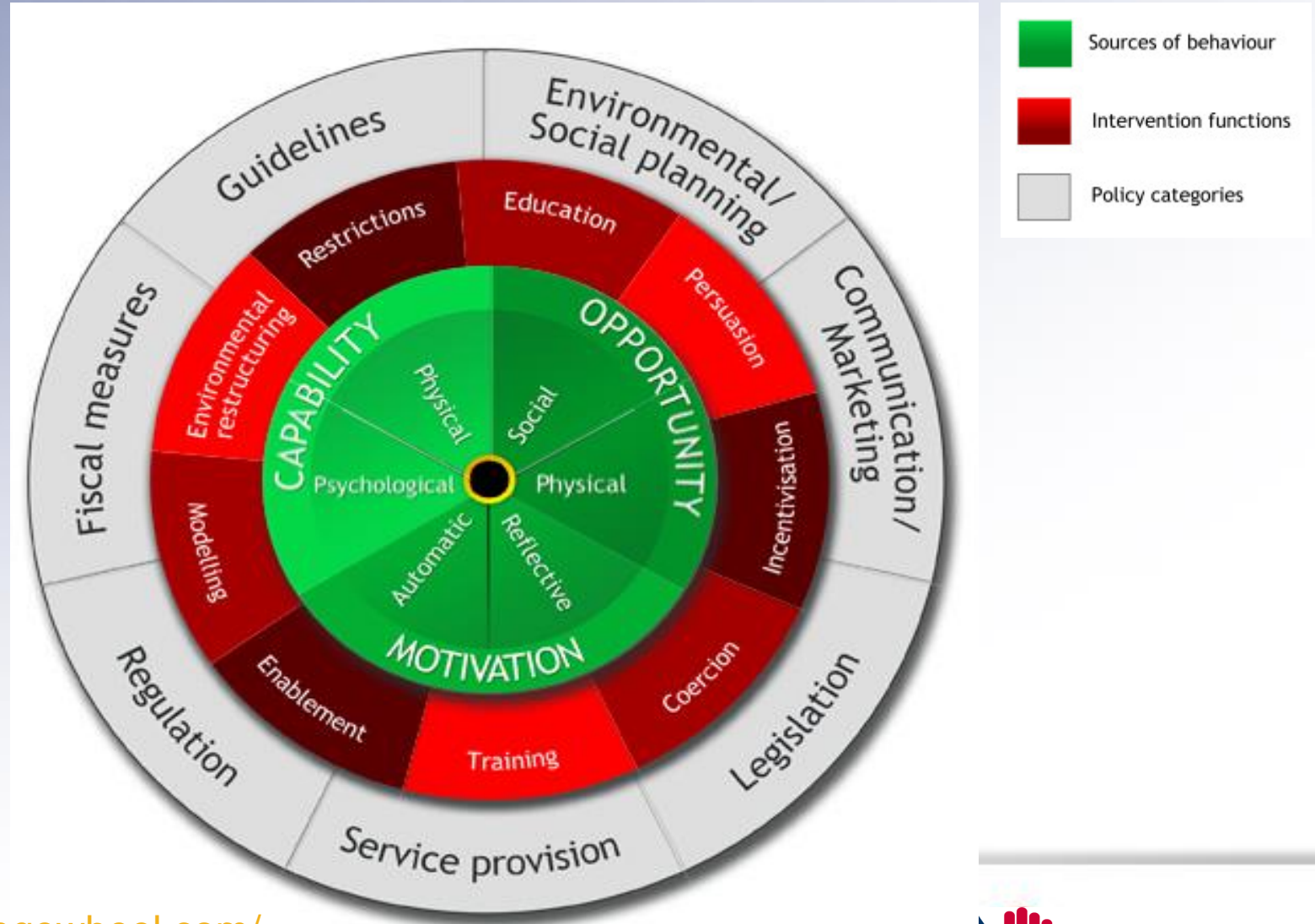◆ Level 2: **Learning**
- Knowledge   *"I know it."*
- Skill   *"I can do it right now."*
- Attitude   *"I believe this is worthwhile to do on the job."*
- Confidence   *"I think I can do it on the job."*
- Commitment   *"I intend to do it on the job."*

◆ Level 3: **Behaviour**

◆ Level 4: **Results**

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The Behavioural Change Wheel (CMO)

- Capability

- Motivation

- Opportunity

Michie S et al http://www.behaviourchangewheel.com/

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Model for the evaluation of the pilot AMS PLP

Antimicrobial Stewardship Political Leadership Programme - Pilot

PATHWAY TO IMPACT

Programme

| Input | Output | Change at personal level | Outcome | Result/impact |

Information → Knowledge

Support → Confidence, skill, attitude

Physical and Interpersonal components → Customer satisfaction Engagement Relevance

Action

Plan

Behaviour (information seeking, positioning, networking)

Influence (being listened to across system)

Change, improvement

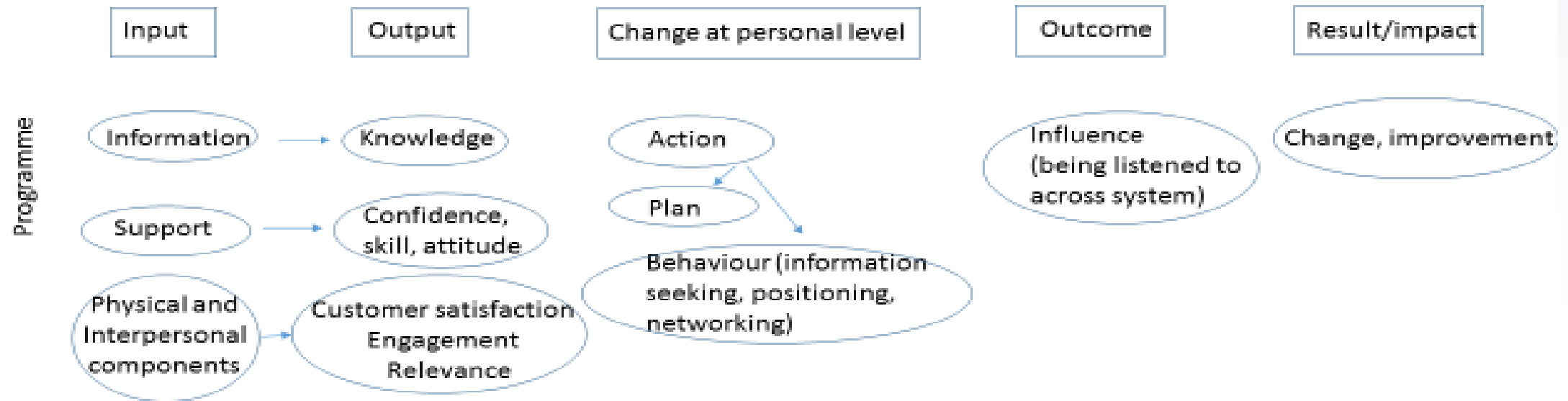Benefits for: participants, stakeholders, RCN, service

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Model for the evaluation of the pilot AMS PLP

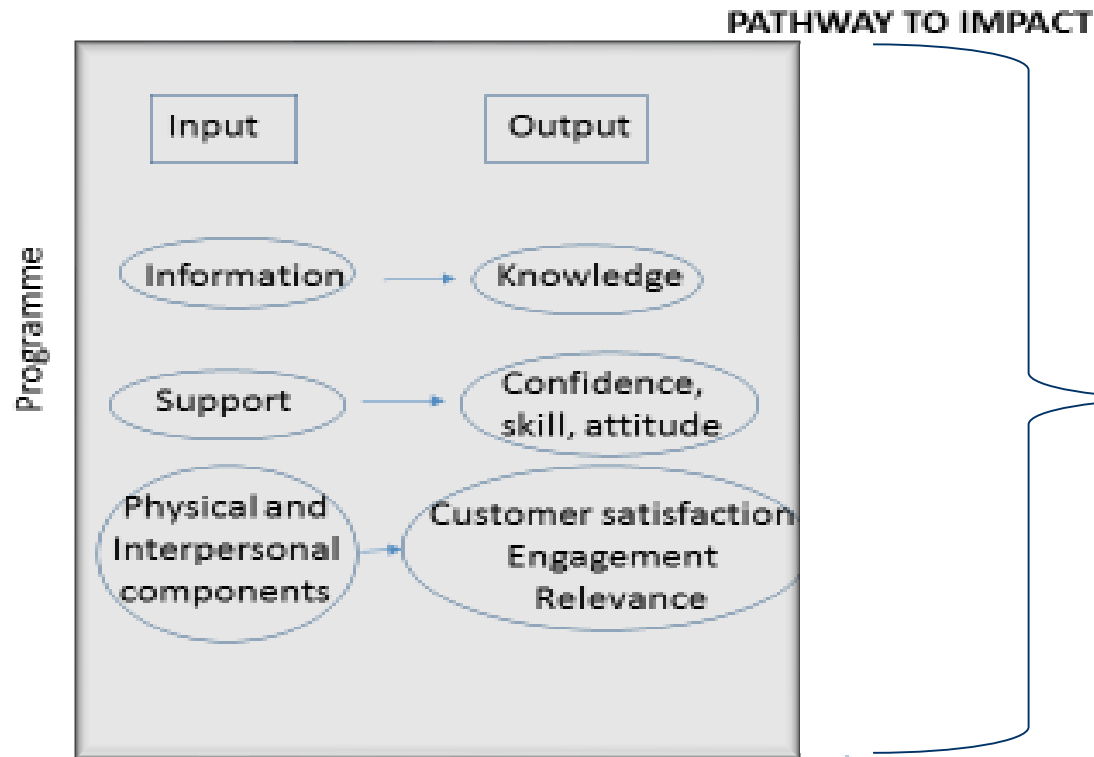**Antimicrobial Stewardship Political Leadership Programme - Pilot**

PATHWAY TO IMPACT

Programme

Input	Output

Information → Knowledge

Support → Confidence, skill, attitude

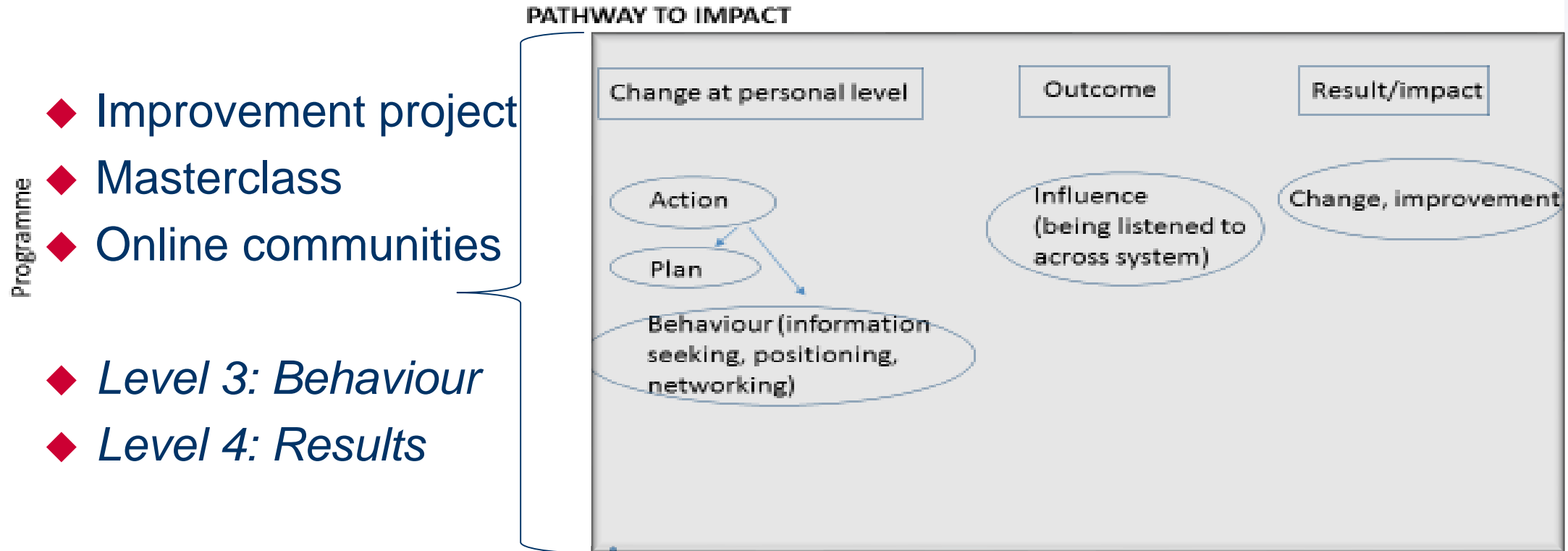Physical and Interpersonal components → Customer satisfaction, Engagement, Relevance

Benefits for: participants, stakeholders, RCN, service

- ◆ 2-day introductory course

- ◆ *Level 1: Reaction*
- ◆ *Level 2: Learning*

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Model for the evaluation of the pilot AMS PLP

Antimicrobial Stewardship Political Leadership Programme - Pilot

- Improvement project
- Masterclass
- Online communities

- *Level 3: Behaviour*
- *Level 4: Results*

Programme

PATHWAY TO IMPACT

Change at personal level

Action

Plan

Behaviour (information seeking, positioning, networking)

Outcome

Influence (being listened to across system)

Result/impact

Change, improvement

Benefits for: participants, stakeholders, RCN, service

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Measurement and data collection

◆ Phase 1

  – 2 day course

  – Before-and-after questionnaire

  – Closed and open-ended questions

◆ Phase 2

  – Masterclass

  – Focus group

  – Follow up questionnaire

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Pre-course questionnaire

◆ Expectations from the course

– 7 items, 5-point scale (strongly disagree to strongly agree)

◆ Extent of knowledge and experience of certain areas

– 6 items, 5-point scale (no knowledge to led work in that area)

◆ Confidence in conducting certain activities

– 8 items, 5-point scale (not at all confident to fully confident)

◆ Perceptions of environment and control

– 8 items, 5-point scale (too many obstacles with no support to full freedom and support)

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Post-course questionnaire

◆ Experience of the course
  – 10 items, 5-point scale (very unsatisfied to very satisfied)

◆ Perceptions of the course
  – 7 items, 5-point scale (strongly disagree to strongly agree)

◆ Confidence in conducting certain activities
  – 8 items, 5-point scale (not at all confident to fully confident)

◆ Perceptions of environment and control
  – 8 items, 5-point scale (too many obstacles with no support to full freedom and support)

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Focus group

◆ Aims of programme

– Clarity, met, how

◆ Benefits and challenges

◆ Training provision

– Participation, support

◆ Application of learning

– Skills and knowledge acquired, used, wished they had

– Changes in behaviour, activities and/or performance

◆ Change and results

◆ General comments

Analysis

◆ Questionnaires

– Descriptive statistics (count, range, mean)

– Comparisons

– Very low N

◆ Focus group

– Thematic analysis

– Based on evaluation framework (eg input: information, support, physical components)

Some indicative findings (pre-post-course Qs)

◆ Prior knowledge

– some idea and/or working knowledge

– highest in specialist area AMS (mean 4.22); lowest in system leadership (mean 2.78)

◆ Satisfaction with the course

– high; highest with networking and CPD opportunity (mean 4.88)

◆ Comparisons between pre-course and post-course perceptions

– high expectations (pre-mean 4.61)

– matched by perceptions (post-mean 4.73)

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Some findings (cont'd)
Comparison of confidence in possessing relevant skills

Please indicate how confident you feel in your skill in relation to the following areas

Areas of activity	Pre-course Mean	Post-course Mean
Influencing/being listened to in the system within your own organisation	3.63	3.88
Influencing and having impact with external organisations, including politically important groups associated with your role	3.38	3.50
Managing competing priorities	3.86	4.00
Identifying where the complexity in situations lie	3.50	4.13
Understanding the local health and social care economy (e.g. services commissioning/ governance/ emerging systems e.g. STPs)	3.00	4.13
Collaborating across professional and geographical boundaries	3.63	4.38
Being open about personal values and professional standards	3.88	4.50
Understanding of what it means to be "political"	2.75	4.25
Overall mean	**3.45**	**4.09**

Improvement in every area

Highest gain

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Some findings (cont'd)
Comparison of perceptions of operational environment (control and support)

Please indicate the extent to which the environment you work in allows you to engage in the following areas		
	Pre-course	Post-course
Areas of activity	**Mean**	**Mean**
Influencing/being listened to in the system within your own organisation	3.50	3.88
Influencing and having impact with external organisations, including political groups	2.63	3.63
Managing competing priorities	3.38	4.00
Identifying where the complexity in situations lie	3.25	4.00
Understanding the local health and social care economy (e.g. services commissioning/governance/ emerging systems e.g. STPs)	3.00	3.88
Collaborating across professional and geographical boundaries	3.25	4.25
Being open about personal values and professional standards	3.63	4.38
Understanding of what it means to be "political"	2.43	3.57
Overall mean	**3.13**	**3.95**

Increased empowerment

5-Full freedom and support; 4-Some freedom with support; 3-Limited freedom with some support; 2-Obstacles with limited support; 1-Too many obstacles with no support

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Summary of findings

◆ select group of professionals with knowledge about specific aspects of political leadership

◆ expected to get a full understanding of the concept, as well as tools, resources and ideas about how to apply

◆ most of the gains came in the cognitive domain (knowledge and understanding; classroom learning)

◆ confidence in knowledge, capabilities and perceptions of control rose

◆ strongest benefits were cross-professional working, networking and their own CPD

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Key characteristics of AMS PLP evaluation

◆ Multi-faceted intervention model

◆ Theory based: logic model, Kirkpatrick, behavioural wheel

◆ Multi-method learning input

◆ Mixed-method evaluation

◆ Evaluation informed training design

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◆Thank you

◆Questions

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