

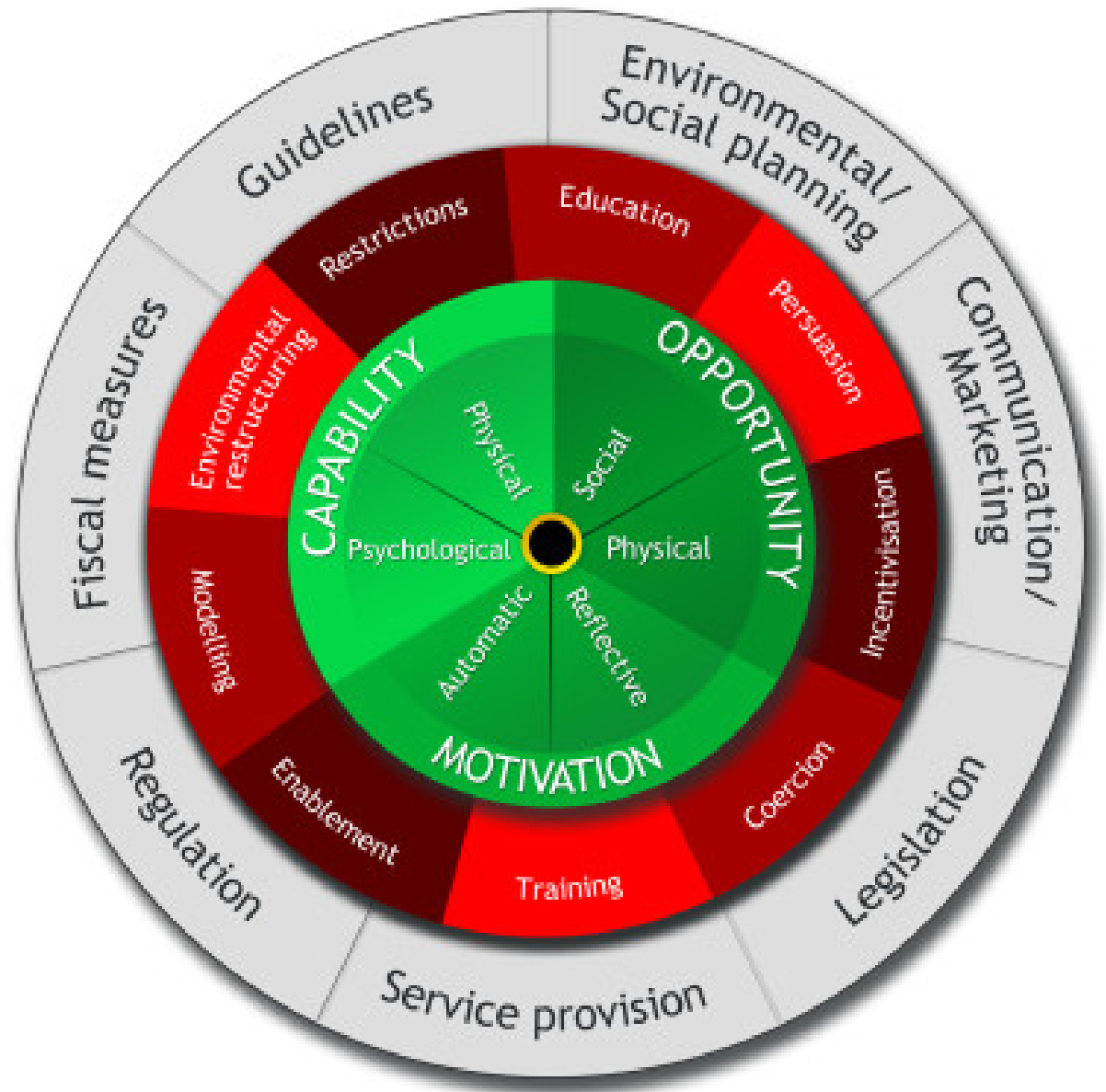
Behavior Change Wheel Steps 1-3: Defining Evidence Practice Gap in Behavioral Terms

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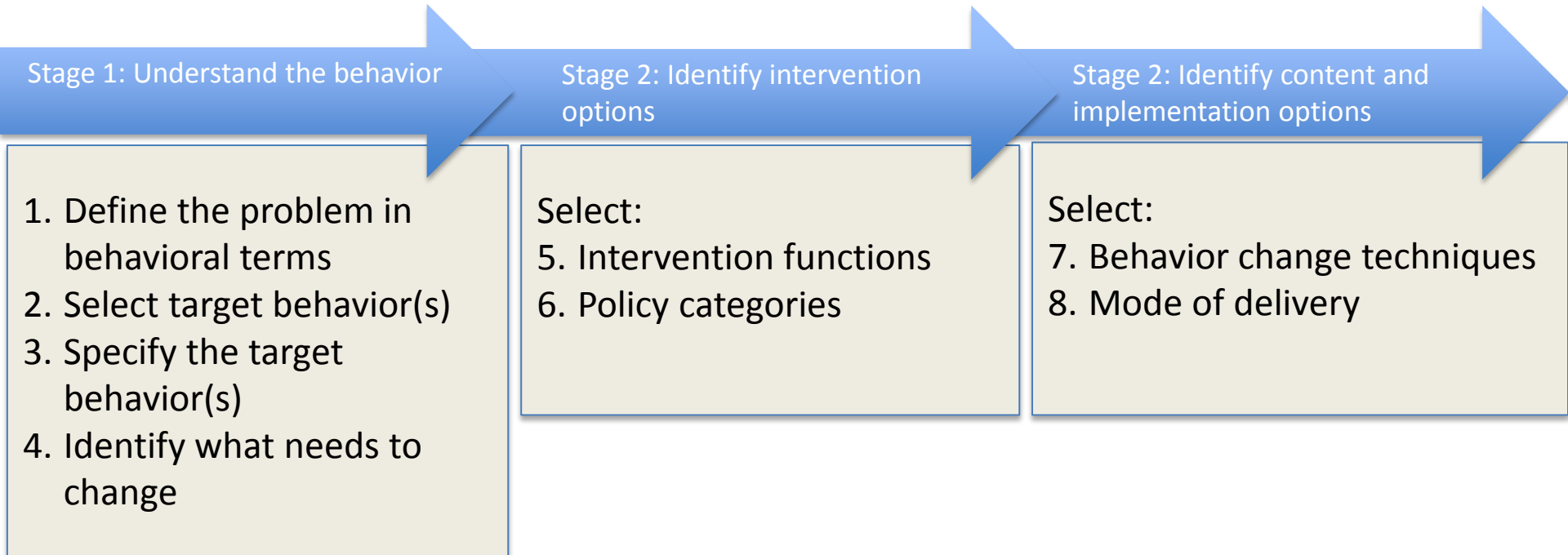
Behavior Change Wheel

- Synthesis of 19 behavior change frameworks
 - None were comprehensive
 - Few conceptually coherent
 - Few linked to a general theory of behavior change
- Proposed advantages of BCW
 - Incorporates common features of prior frameworks
 - Identifies concrete and distinct intervention functions to guide design
 - Linked to a behavior change theory that can be applied in any setting

- Sources of behaviour
- Intervention functions
- Policy categories



Using the BCW



Remaining slide content adapted from:

1. Michie S et al. The BCW – A Guide to Designing Interventions. Silverback Publishing. 2014.
2. Michie S. The Behaviour Change Wheel: a method for designing effective interventions. Implementation Science Summer School, Dublin 2012

Step 1 – Define the problem in behavioral terms

- What behavior change is needed to achieve the health outcome of interest?
 - Target individual, group or population involved in the behavior
 - Specific behaviors involved

Example 1

- Problem – Too much traffic
- Is that specific enough?
- What specific behaviors are involved?
 - Car purchasing
 - Car use

Example 2

- Problem: High rates of obesity
- Behavior – weight loss
- Specific behaviors?
 - Increasing physical activity
 - Reducing calorie intake
- Even more specific behaviors?
 - Increasing the amount of walking
 - Reducing consumption of high fat foods
 - Reducing time watching television

Example 3

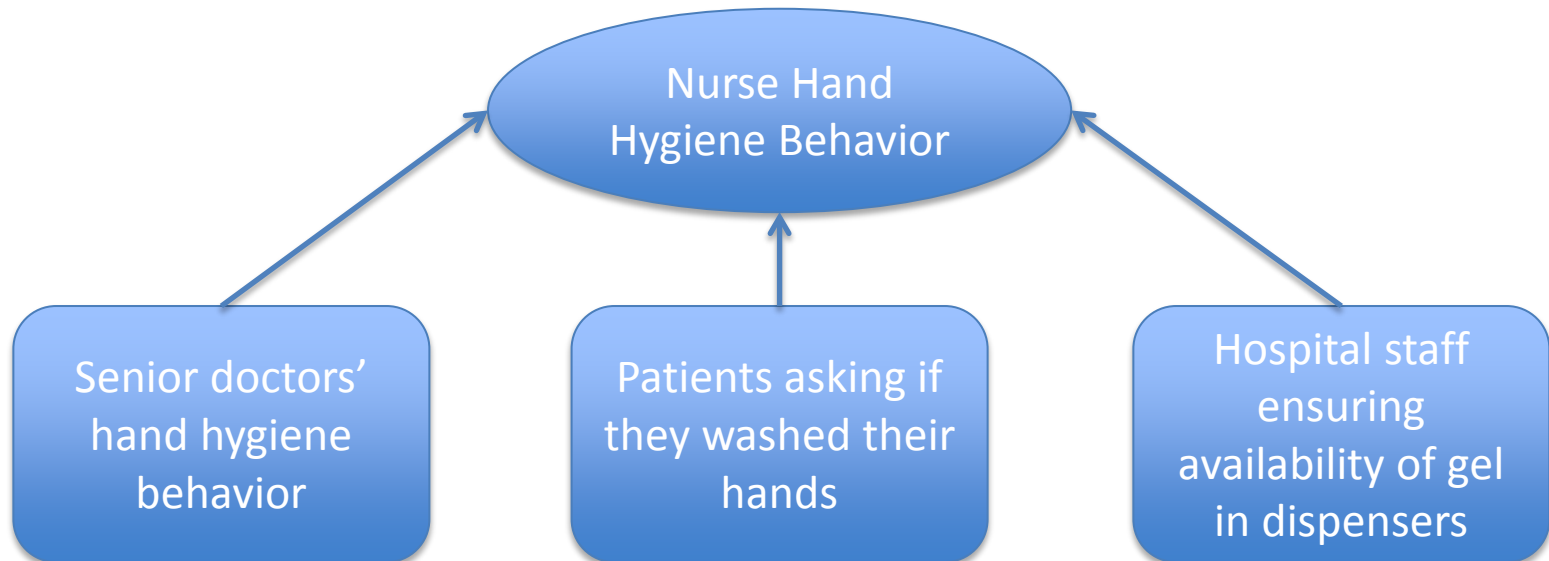
- Problem: High infection rates in hospitals
 - Infection rates are not a behavior
- Behavior: Improve hygiene in hospitals
- Specific behaviors?
 - Cleansing hands with alcohol rub (hand hygiene)
 - Using protective clothing
 - Cleaning/disinfecting surfaces
 - Maintaining proper isolation
- Each of the above can be specified even more precisely

Infection Rates in Hospitals

What behavior?	Hand hygiene practices in all opportunities identified by national guidelines
Where does behavior occur?	Hospital wards
Who is involved in performing the behavior	Hospital nursing staff

Step 2 – Select target behaviors

- Behaviors do not occur in isolation
 - Interact in a system with related behaviors of the same or other individuals



Consider all potential target behaviors

Townsville Residential Energy Demand Program

- Aim – Design intervention to reduce home energy consumption
- Target behaviors listed by environmental experts
- 231 energy-reducing behaviors identified
 - Reducing electricity consumption (187)
 - Onsite electricity generation (7)
 - House construction/retrofit options (37)

Identify which behavior(s) to intervene upon

- Limit to one or a few behaviors
 - Incremental, iterative process best
- Criteria to select which target behaviors to start with
 - Likely impact if behavior is changed
 - How easy is it likely to be to change the behavior
 - Centrality of the behavior (likelihood of positive spillover effects on other behaviors)
 - Ease of measurement
- Rate target behavior for each criteria
 - very promising, promising, unpromising but worth considering, not acceptable

Example – Listing target behaviors

Intervention Aim: Improve hygiene in hospitals

Equipment

Keeping sterile single use items in packaging until use
Sterilizing reusable medical equipment
Handling sharps appropriately

Patient Care

Removing indwelling lines/catheters when no longer needed

Hospital Environment

Cleaning furniture
Changing bed linen

Personal Hygiene

Cleaning hands using alcohol gel
Ensuring availability of alcohol gel
Wearing PPE

Example – Rating target behaviors

Potential target behavior	Impact	Ease of Change	Positive spillover	Ease of Measurement
Keeping sterile single use items in packaging until use	Worth considering	Very promising	Worth considering	Worth considering
Cleaning hands using alcohol gel	Very promising	Promising	Promising	Promising

Step 3 – Specify the target behaviors

- Be as specific as possible about behavior and its context
 - More precise → easier to perform behavioral analysis and decide what to do
- Eating less
 - Cutting out snacks between meals
 - Substituting fruit for cakes/sweets

How to specify the target behavior(s)

- **Who** needs to do **what** differently, **when**, **where**, **how**, **with whom**?

Hand Hygiene Example

Target behavior	Clean hands using alcohol gel
Who?	Nurses
When/How often?	Start of each shift After using bathroom Every time before entering patient room Every time after exiting patient room
Where?	Hospital Wards
How?	Rinse with alcohol gel and air dry
With whom?	Alone

Summary

Stage 1: Understand the behavior

- 1. Define the problem in behavioral terms**
- 2. Select target behavior(s)**
- 3. Specify the target behavior(s)**
4. Identify what needs to change

Stage 2: Identify intervention options

- Select:
5. Intervention functions
 6. Policy categories

Stage 2: Identify content and implementation options

- Select:
7. Behavior change techniques
 8. Mode of delivery