

Defining policy-relevant indicators to evaluate regional injury prevention initiatives

Goodman D, Pike I, Macpherson A, Turcotte K, Desapriya E, Randall E, and Evans D

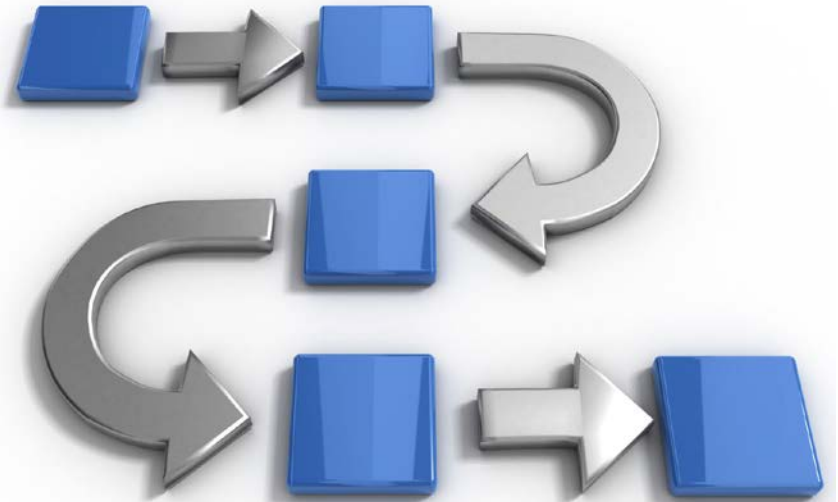


a place of mind



Outline

- Background and Objective
- Methodology
- Results
- Evaluation
- Next steps



Background

Injury as epidemic

- Leading cause of death < age 45
- 19.8 billion annually
- If injury were a disease we would prioritize developing a vaccine



Annual Injury in BC

- 400,000 people are injured:
 - 1,700 die
 - 9,000 suffer permanent disability
 - 32,000 are hospitalized



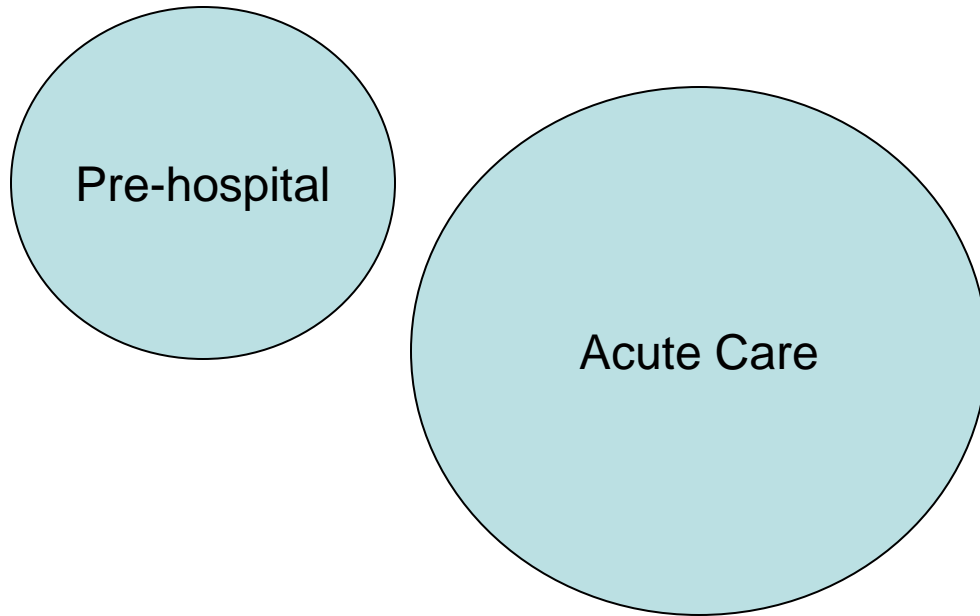
- 41,000 potential years of life are lost
- cost of injury over 2.8 billion dollars in B.C

Background

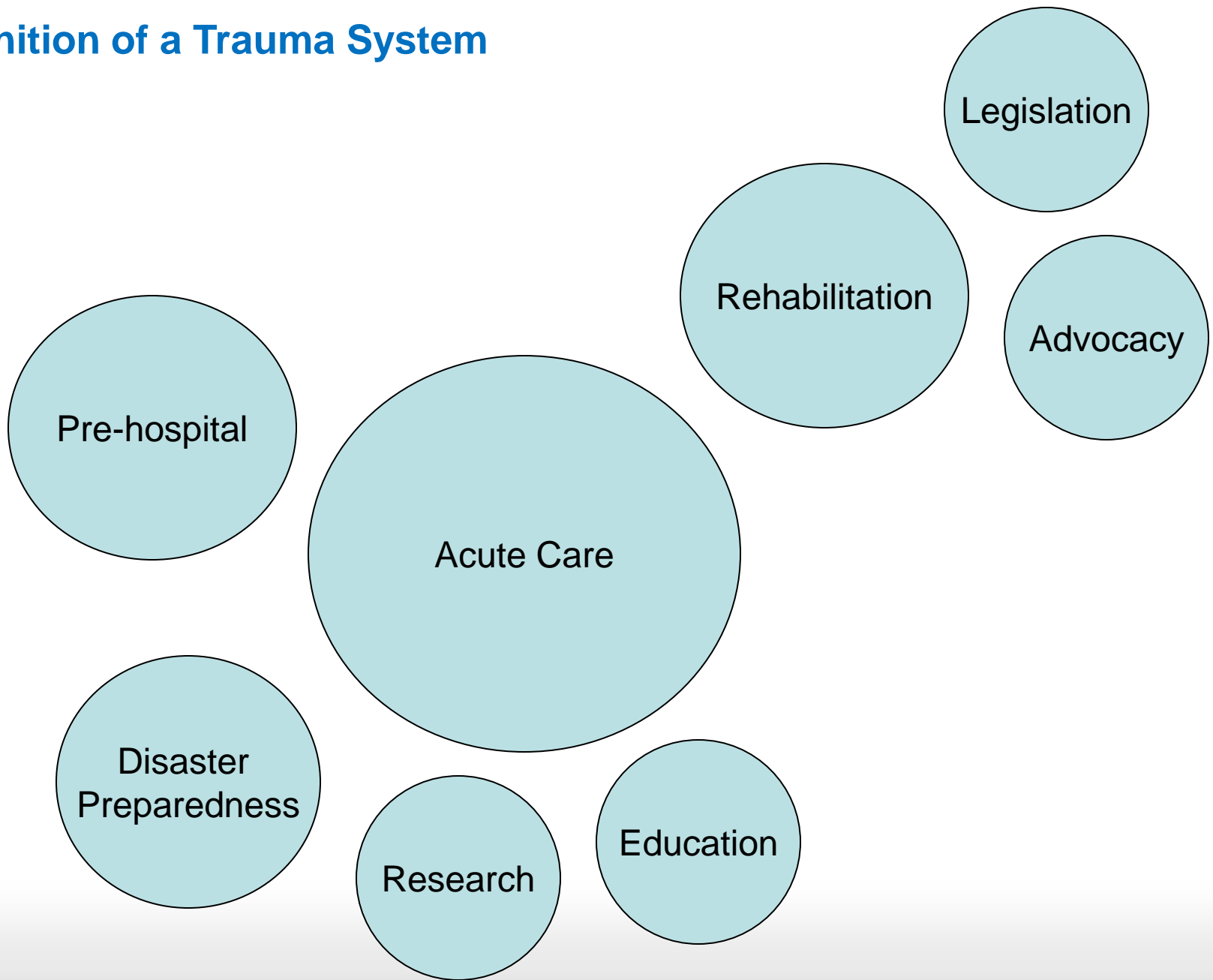
What are 'trauma systems'?

What are trauma systems supposed to do?

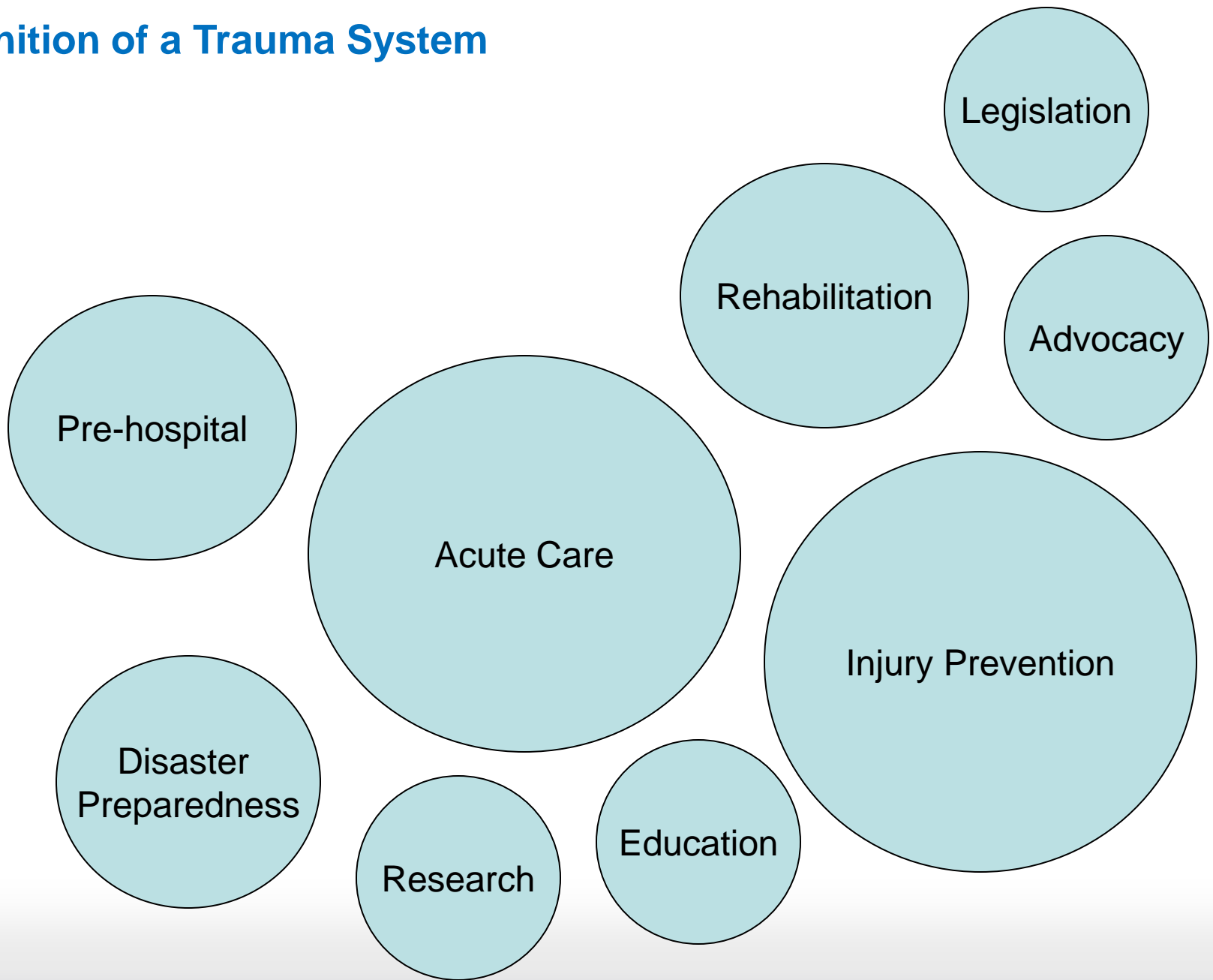
Definition of a Trauma System



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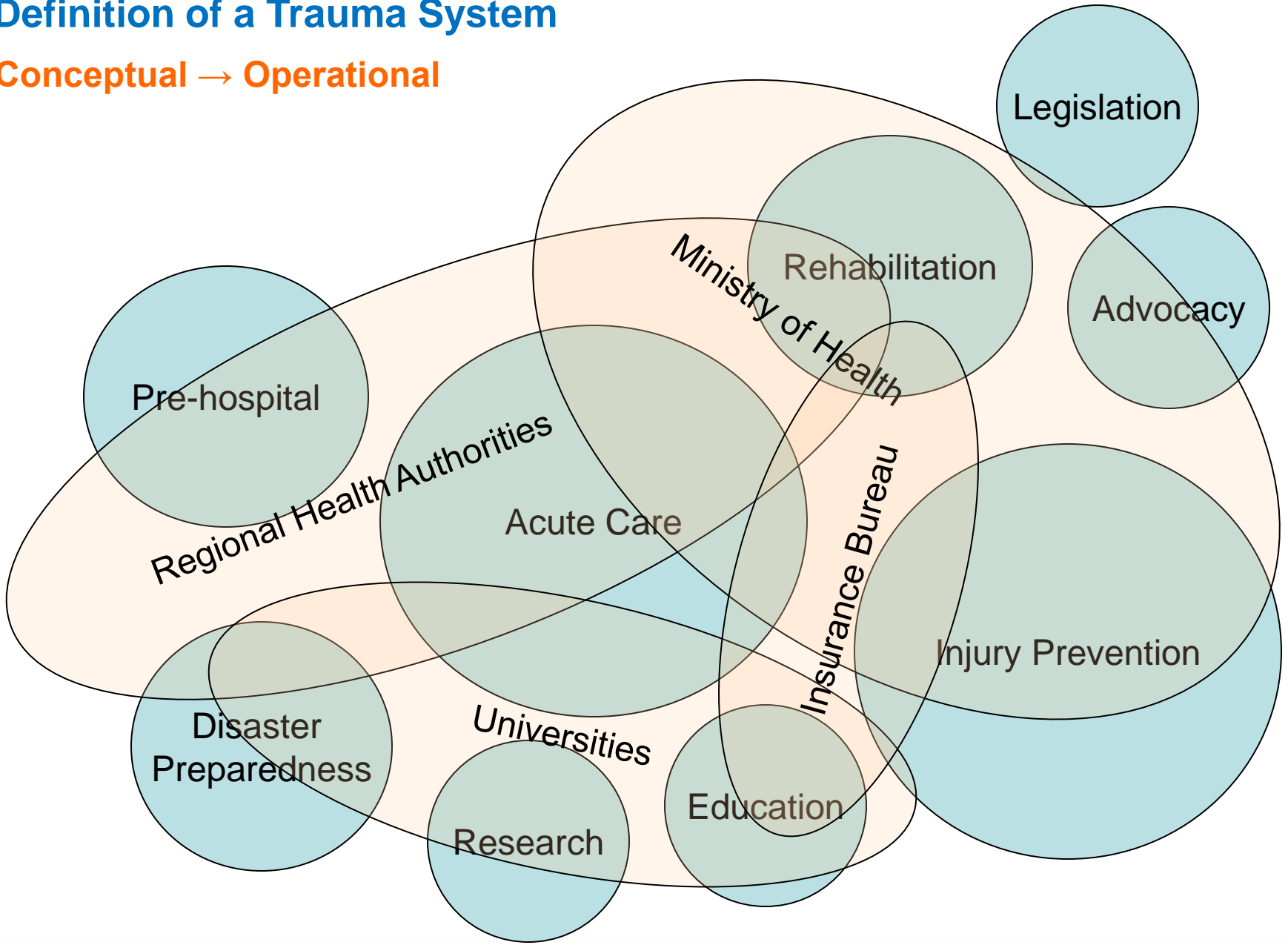


Definition of a Trauma System



Definition of a Trauma System

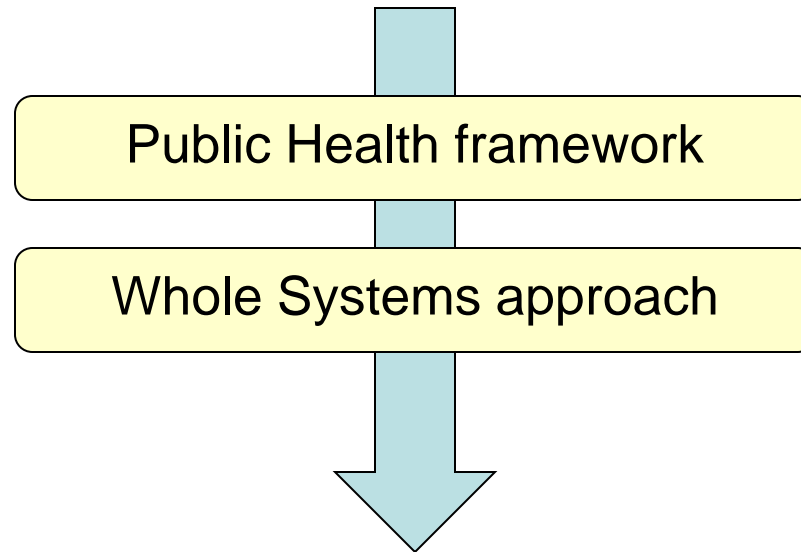
Conceptual → Operational



How do you choose what to fund?

- Alternate Funding Plan for trauma physicians
- EMS helicopter program expansion
- Trauma Quality Improvement Program (TQIP)
- Jumper nets under the 5 Vancouver area bridges
- Enforcement of distracted driver laws
- Educational minimize risk-taking behaviour in youth
- A provincial gun registry

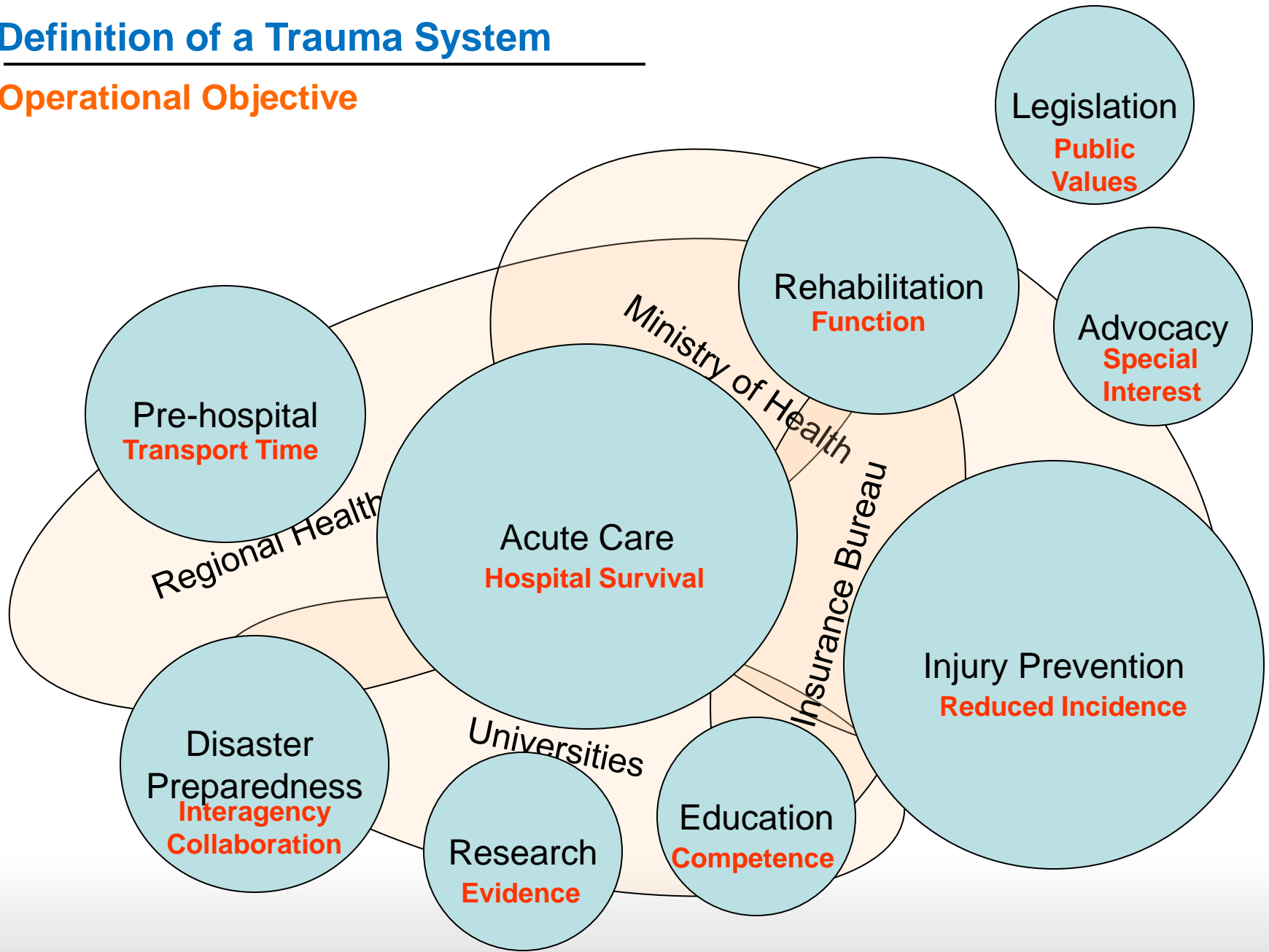
Patient-level trauma care



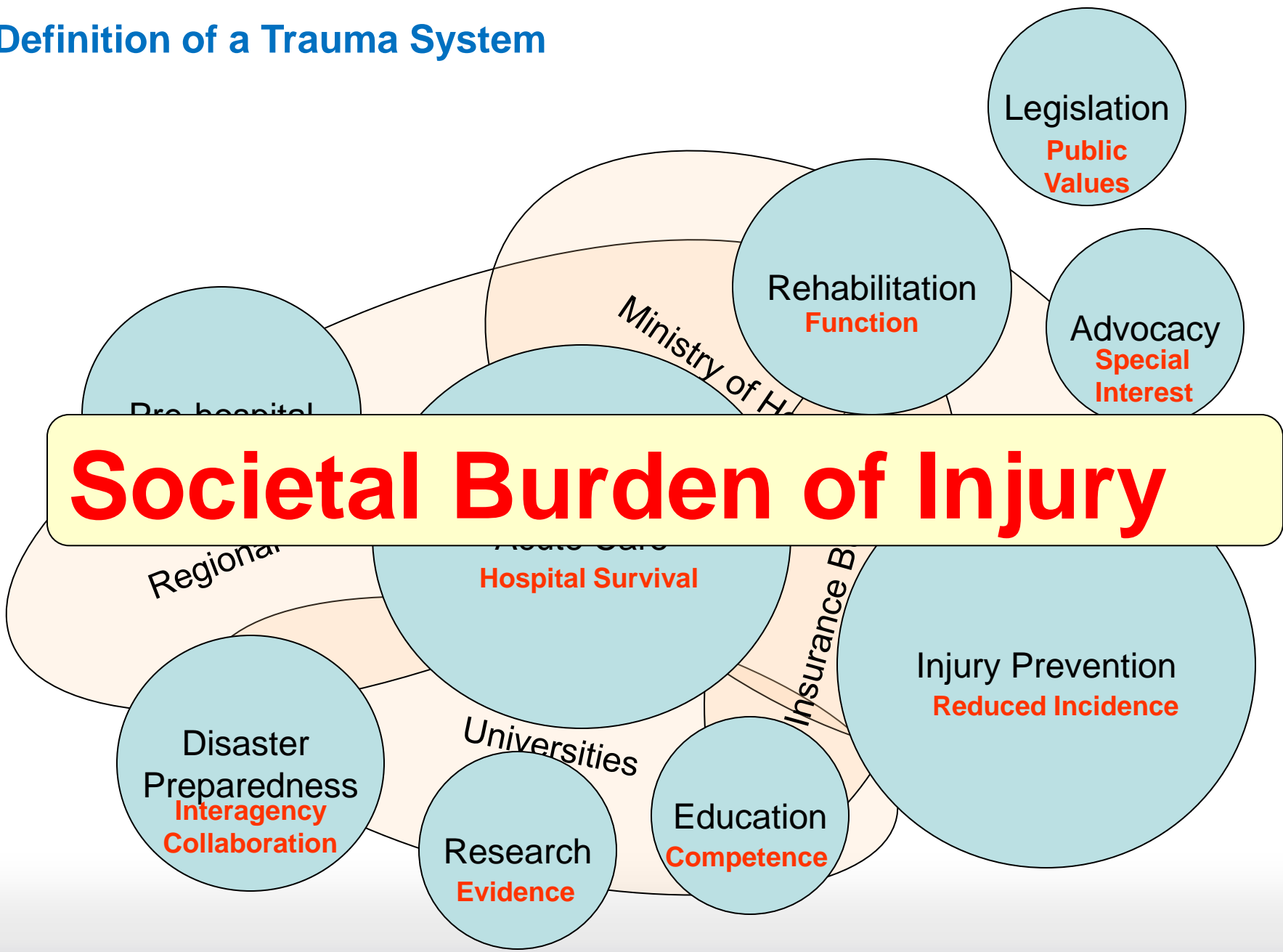
Population-level injury management

Definition of a Trauma System

Operational Objective



Definition of a Trauma System



Research Objective

What population-level effectiveness measures are likely to be preferred by key decision makers to evaluate the impact of injury prevention initiatives?



Our opportunity

Define policy-relevant performance measures for injury prevention programs and initiatives.

- guide program improvement
- benchmarking
- public reporting
- research
- future investment

Methods

- Lit review/briefing paper
- Survey of key informants
- Workshop
 - Breakout sessions
 - Computer network facilitation
- Follow-up summary
- Presentation to decision makers
- Review by informants

Methods

Indicator Evaluation

- Signal action
- Translatable
- General utility

Literature Review

- A comprehensive MEDLINE search was conducted

Search Criteria (N=55 studies identified)

- Economic evaluation studies on unintentional primary and secondary injury prevention strategies
 1. cost effectiveness
 2. injury prevention
 3. interventions

Overview of currently available economic evaluation methods used for injury prevention

Type of Study	Measurement of Benefits	Economic Summary Measure
Cost-minimization analysis	No measure of effects since they are equal	Net cost or cost of illness
Cost-effectiveness analysis	Natural units (e.g. life years gained, injuries prevented)	Cost-effectiveness ratio, cost per case averted, cost per life year saved
Cost-benefit analysis	Monetary units	Net benefits or cost benefit-to-cost ratio
Cost-utility analysis	Healthy years (e.g. quality adjusted life years (QALY))	Cost per QALY

Source: Polinder et al., 2012

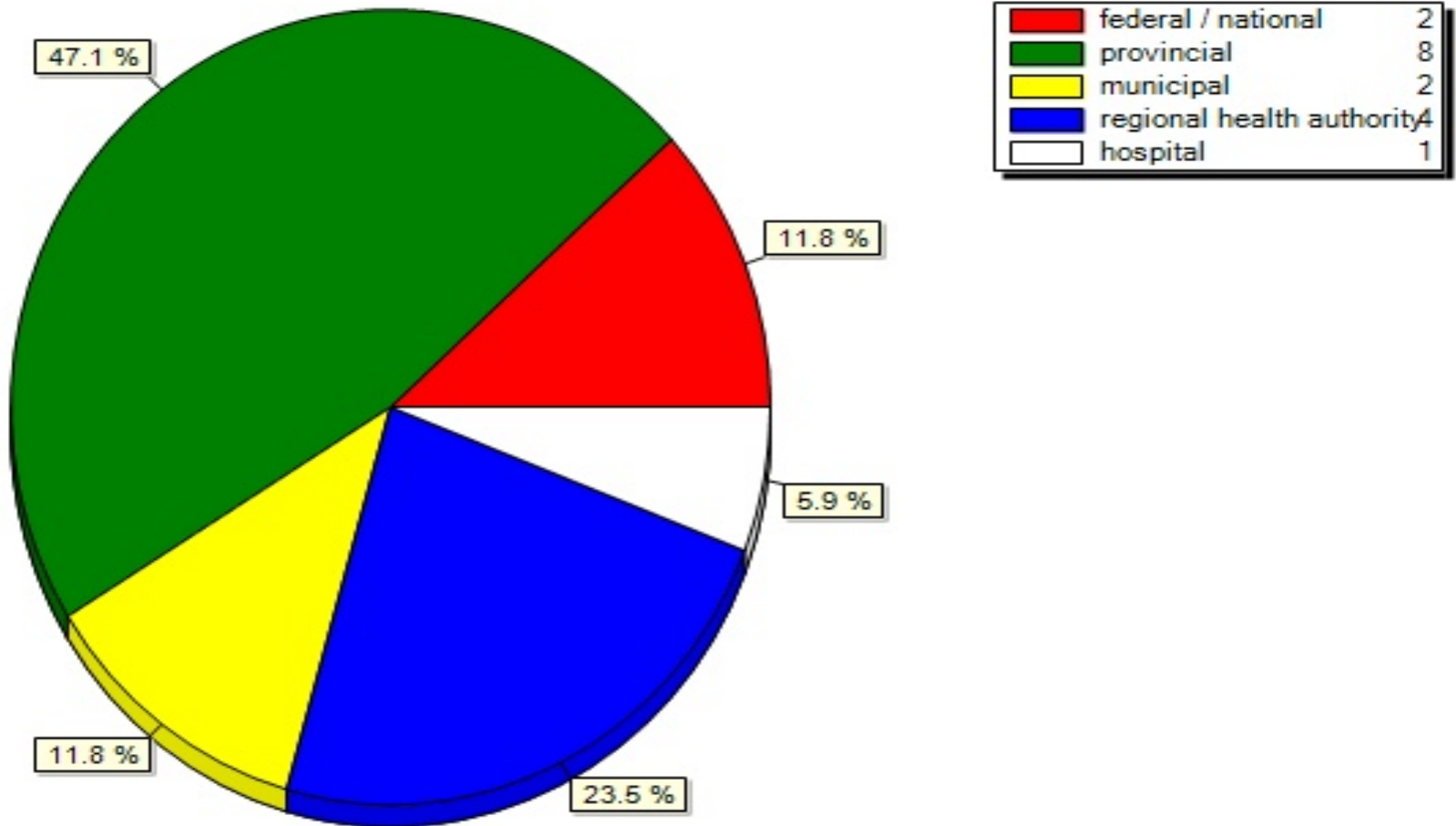
Value Based Healthcare?

Who defines value? We do.



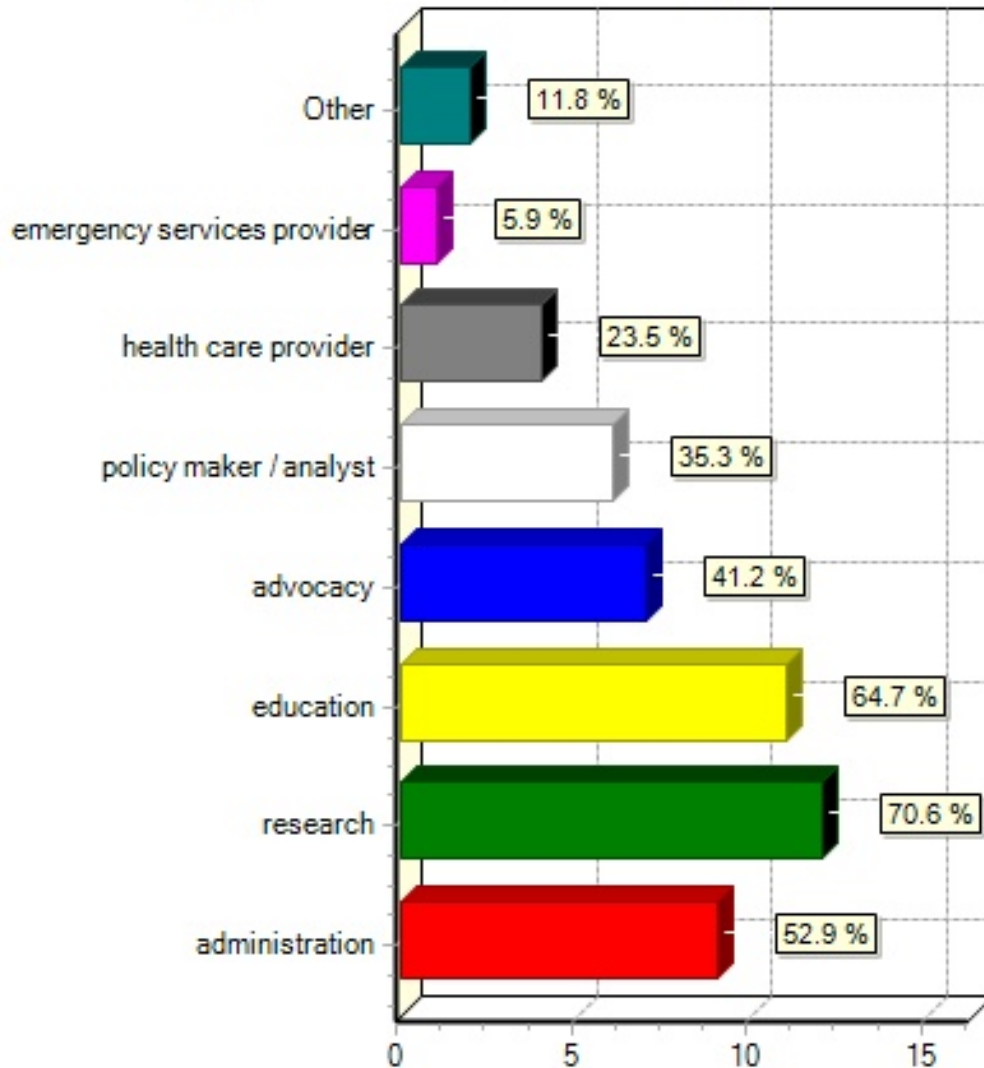
Professional Realm

At which level do you primarily work? (choose one)



Professional Role

Describe your professional roles (choose all that apply)



administration	9
research	12
education	11
advocacy	7
policy maker / analyst	6
health care provider	4
emergency services provider	1
Other	2

- health board, consultant to industry
- insurance

Reminder to consider:

- **Importance**: relevant and actionable at population level significant population burden
- **Scientific Acceptability**: reliable and valid
- **Feasibility**: based on obtainable and sustainable data
- **Usability**: understandable and high quality

Discussion

- 100+ metrics identified
- First screening: 27 indicators
 - Group discussion and merged to a list of 13 indicators
- Second screening using the NQF criteria
 - importance
 - scientific acceptability
 - feasibility
 - usability
- 5 indicators (with strong approval)
- 9 indicators (with moderate approval)

Strongly supported indicators

- mortality rate
- resource implication
- quality of life
- economic burden of injury
- prevalence of key at-risk behaviours

Moderately supported indicators

- Lost productivity
- PYLL
- Alignment with government priorities
- Alignment with key / socially resonant objectives
 - Falls in elderly
 - Alcohol-related injury
 - Motor vehicle collisions
 - Violent injury (assault / suicide)
- Proportion of budget devoted to prevention

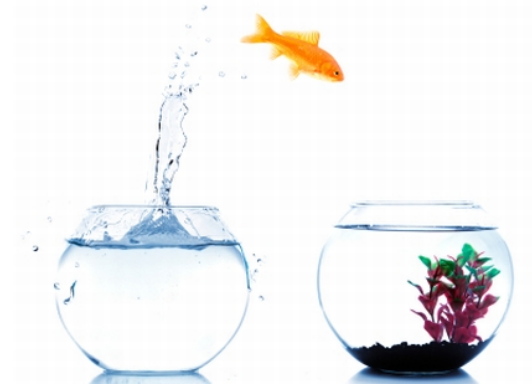
Group Evaluation

- Agreement on the chosen indicators
 - overall mean: 7.45/10
- Potential success of implementing chosen indicators
 - Overall mean: 7/10



Next steps

- Refinement of indicators
 - Presentation to decision makers
 - Further review by key informants



Many thanks to:

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a place of mind



Vancouver
CoastalHealth

Research Institute

Healthier lives through discovery



END

What is an indicator?

INJURY INDICATOR

- A summary measure which denotes, directly or indirectly, variations and trends in injury or an injury control related phenomenon

