

Our Voice; A Citizen Science Approach

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Background

- ▶ We face an epidemic of lifestyle-related diseases
 - ▶ Individual-based interventions have limits
 - ▶ The environment offers opportunities and places constraints on individual behavior
 - ▶ Citizen science can harness the energy of community residents to mobilize for environmental change
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Citizen science

- ▶ Involving members of the public who work with professional scientists to advance a research project



Leveraging Citizen Science and Information Technology for Population Physical Activity Promotion
King, Abby C.; Winter, Sandra J.; Sheats, Jylana L.; Rosas, Lisa G.; Buman, Matthew P.; Salvo, Deborah; Rodriguez, Nicole M.; Seguin, Rebecca A.; Moran, Mika; Garber, Randi; Broderick, Bonnie; Zieff, Susan G.; Sarmiento, Olga Lucia; Gonzalez, Silvia A.; Banchoff, Ann; Dommarco, Juan Rivera
Translational Journal of the American College of Sports Medicine. 1(4):30–44, May 15, 2016.

Citizen Science “for the people”

- ▶ Residents contribute to biomedical research by donating biological specimens, participating in genomic medicine, or crowdsourcing applications.

ClinicalTrials.gov is a registry and results database of publicly and privately supported clinical studies of human participants conducted around the world.

Citizen Science “with the people”

- ▶ Residents document and report on natural phenomena, such as wildlife migration, earthquakes, and weather.

Invasive Plants Citizen Science Program

Glacier National Park has an established program to assist park managers map where invasive plants exist in the backcountry. The data gathered by park staff and Citizen Scientists throughout Glacier's million acres provides critical assistance in mapping these invasive plants and managing them.

Citizen Science “by the people”

- ▶ Residents document their physical and social environments, code and synthesize the data, and use their findings to advocate for change.



Our Voice; The Process

- ▶ Discover
- ▶ Discuss
- ▶ Activate
- ▶ Change



The Discovery Tool

- ▶ Cell-phone enabled
- ▶ Can embed survey questions
- ▶ Data are GIS-coded and uploaded to a server at Stanford University
- ▶ Photos and audio/captions downloaded and used to discuss environmental features



Discussion

		Feasibility	
		High	Low
Importance	High	Highest priority – Focus your efforts to accomplish these tasks	Lower priority – Identify smaller tasks that can more easily be accomplished while still keeping the larger goal in mind
	Low	Lower priority – Think about ways to make these tasks more impactful	Lowest priority

Activation

- ▶ Meet with allies, stakeholders, and/or policy makers
- ▶ Present and discuss findings and potential solutions
- ▶ Agree on action steps

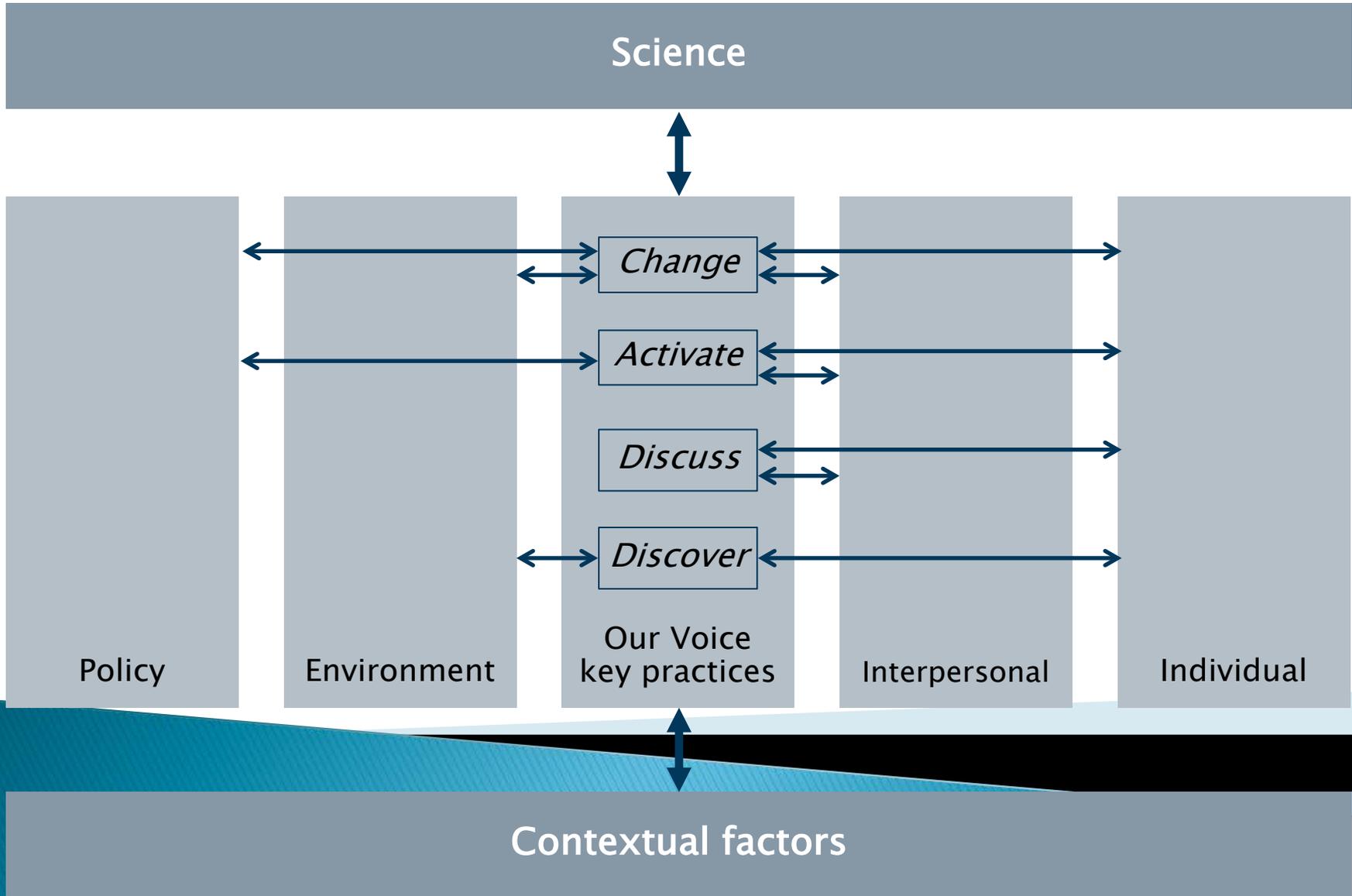


Change

- ▶ Follow up on action plan
- ▶ Track activities and results
- ▶ Evaluate outcomes
- ▶ Celebrate and share successes!



Our Voice; The Conceptual Model



Examples of Our Voice Projects

- ▶ Setting: Senior Housing Site in East Palo Alto
- ▶ Citizen Scientists: 22 older adults
- ▶ Barriers to healthy living
 - Unsafe street crossings, lack of fresh produce
- ▶ Facilitators of healthy living
 - Space for garden, supportive manager

Outcomes		
Person Level	Community Level	Built Environment
↑ neighborhood cohesion	Cooking classes	Community Garden
↑ fresh produce availability	Community Advocacy Team	Funds to incorporate health in general plan
↓ street traffic		Sidewalk inventory and repair program

Examples of Our Voice Projects

- ▶ Setting: Israel
- ▶ Citizen Scientists: 135 older Jewish and Arab Israelis
- ▶ Barriers to healthy living
 - Lack of access to open space, public transportation
- ▶ Facilitators of healthy living
 - Sense of community, appealing destinations

Outcomes		
Person Level	Community Level	Built Environment
Not assessed	↑ intercultural dialogue ↑ participation in community events Formation of local walking groups	Creation of older-adult-friendly walking routes and maps Local authorities invited residents to participate in the planning process

Examples of Our Voice Projects

- ▶ Setting: Upstate New York
- ▶ Citizen Scientists: 24 older adults
- ▶ Barriers to healthy living
 - Unsafe roads, playground in poor repair
- ▶ Facilitators of healthy living
 - Well-maintained sidewalks, farmer's markets

Outcomes		
Person Level	Community Level	Built Environment
Not assessed	Development of civic engagement group Fund-raising for a "Fun and Fitness Area"	

Proposed new Our Voice Project

- ▶ Partnership with the California Dairy Council and LAUSD
 - ▶ Setting: High School Lunch Rooms
 - ▶ Citizen Scientists: Students on School Wellness Council
 - ▶ Goals: Identify barriers to and facilitators of healthy eating in school lunch rooms; mobilize for change
 - ▶ Predisposing factors: existing structure for informing leadership; policies that support project goals.
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Future Directions

- ▶ New partnerships for community mobilization?
 - Beyond physical activity and nutrition
 - Leveraging existing activist groups

