Las Encuestas de Salud como Instrumento de Acción en Salud Comunitaria

La Experiencia de Wisconsin

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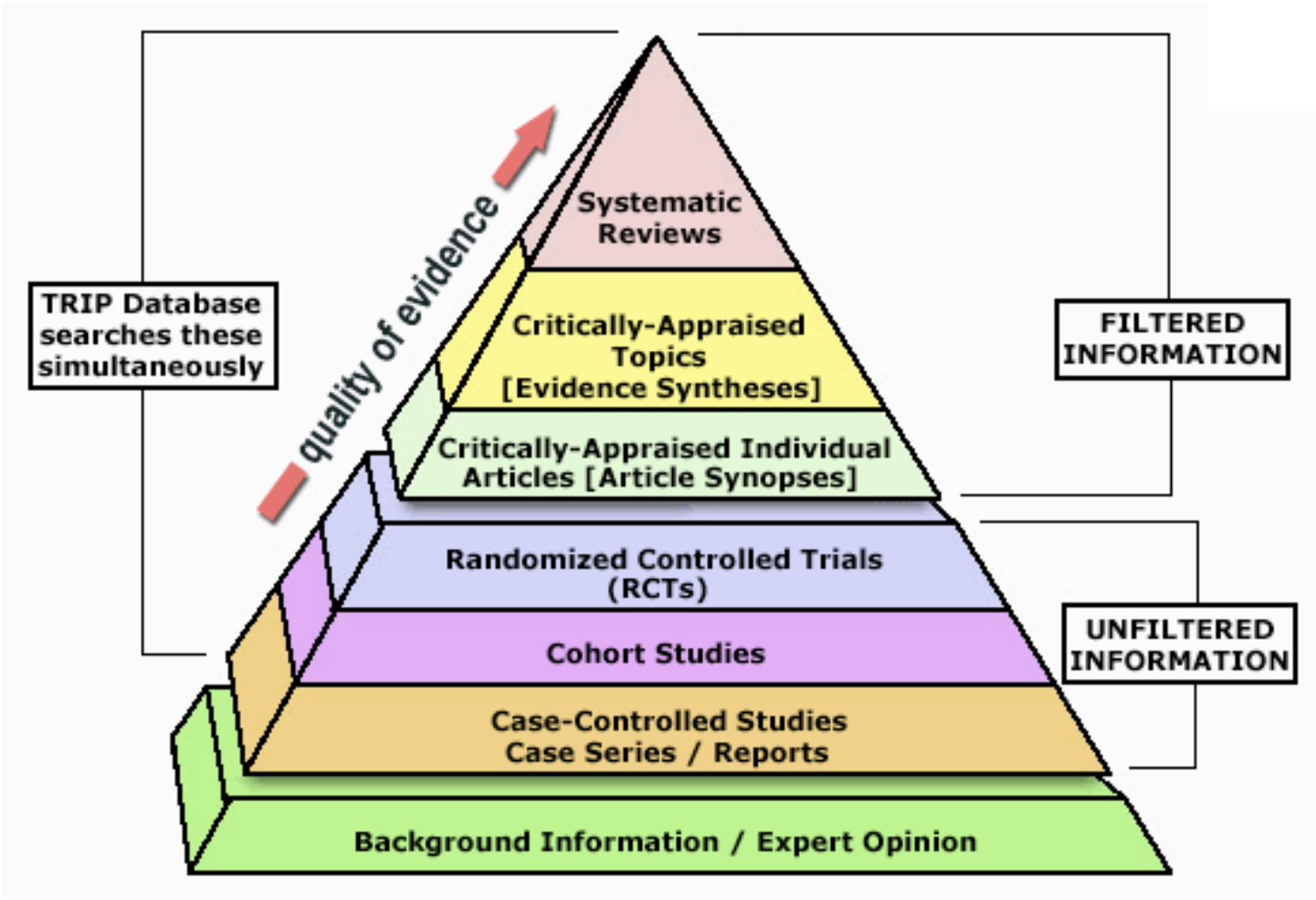
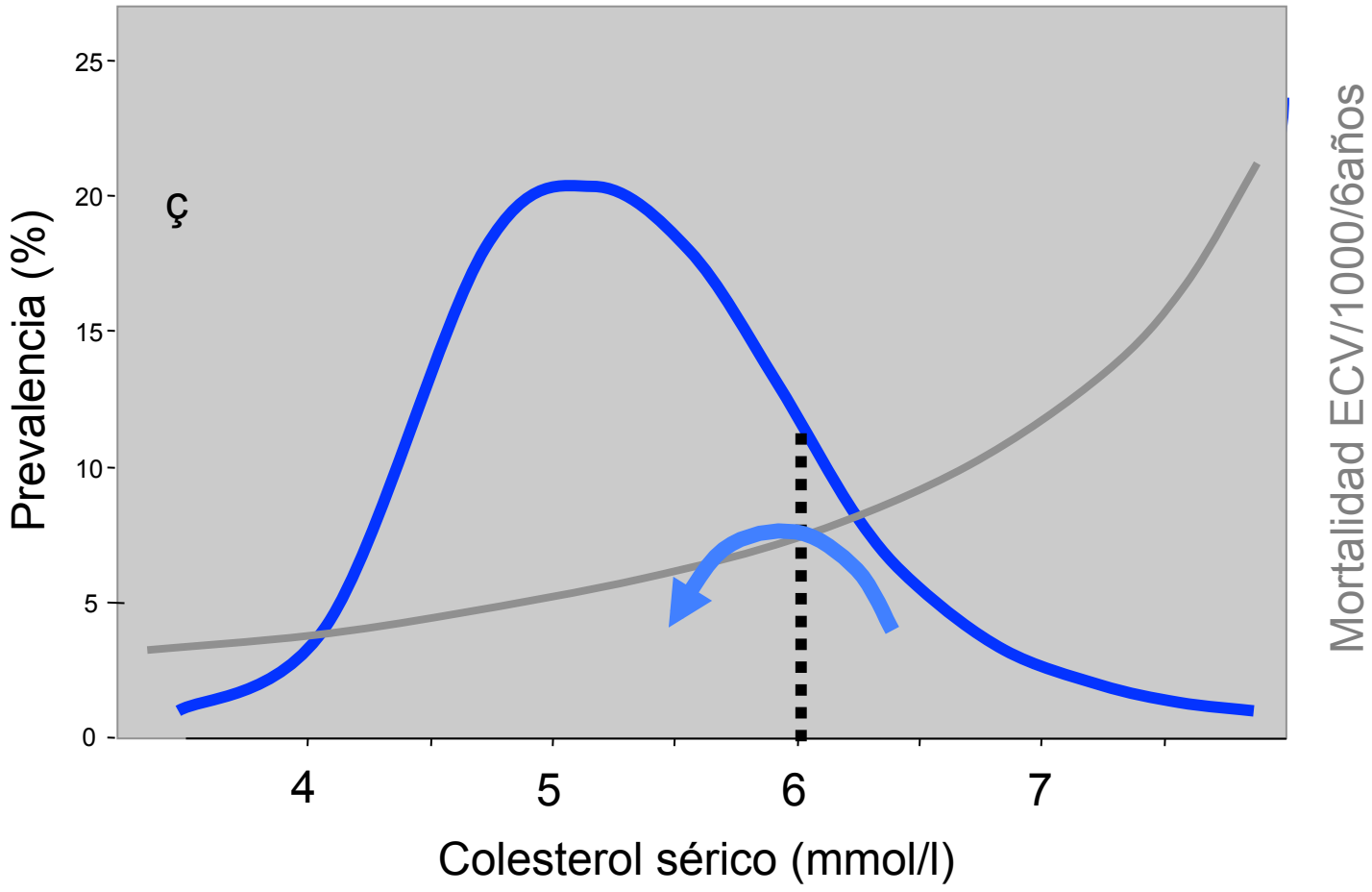
Medicina Basada en la Evidencia



Medicina Basada en la Evidencia

Enfoque en el indivíduo (paciente)

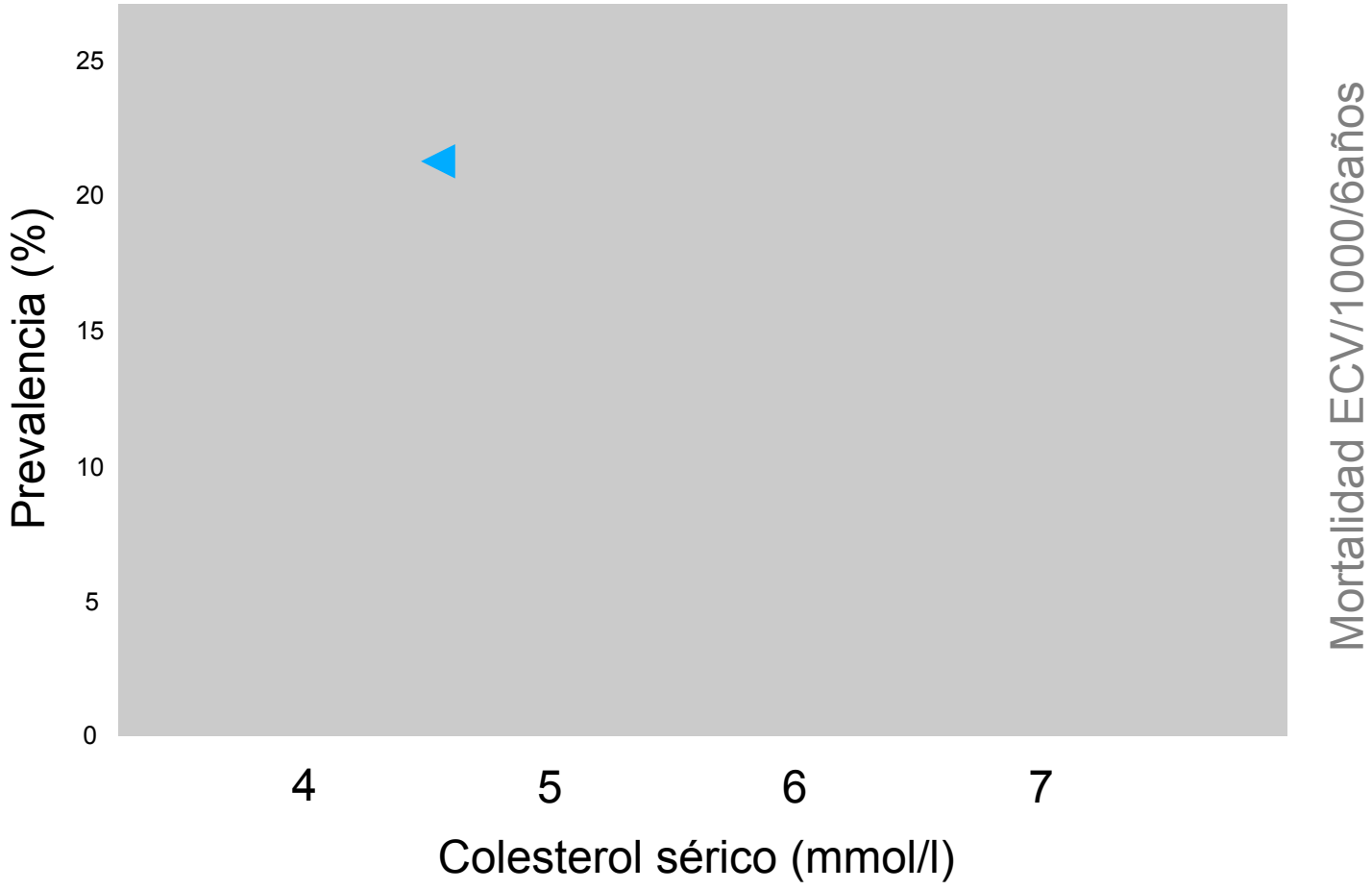
- Cribado
- Tratamiento



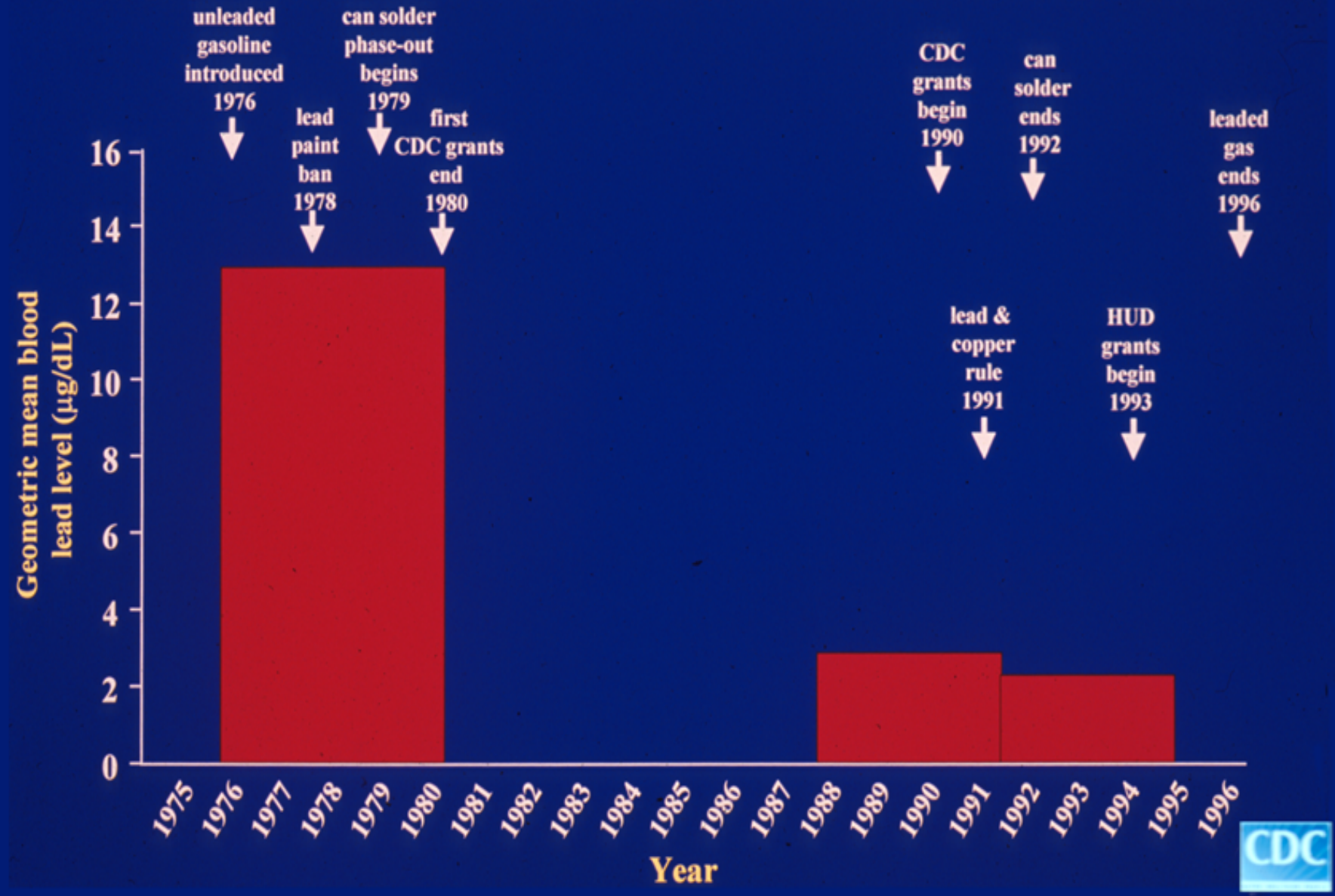
¿Salud Pública Basada en la Evidencia?

Enfoque poblacional (G. Rose, 1992)

- Educación, promoción de la salud a nivel de la población
- Legislación, políticas



Geometric Mean Blood Lead Levels Among Persons 1+ Years of Age and Selected Lead Control Measures, United States, 1975-1996



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Community Intervention Trials: Reflections on the Stanford Five-City Project Experience

Stephen P. Fortmann,[1,2] June A. Flora,[1,3] Marilyn A. Winkleby,[1,2] Caroline Schooler,[1] C. Barr Taylor,[1,4] and John W. Farquhar[1,2]

…definitive conclusions about the overall effectiveness of the communitywide efforts were not always possible.

The authors have learned how little they know of the determinants of population-level change and the characteristics that separate communities that change quickly in response to general health information from those that do not.

In th…ntervention s… diseas…These trials was th…n attributab… interre…e potential … the m…ared sever… numbe…could be st… lesson…fford Five-C… advan…eralizability … amplifi…in the com… other community programs fo…g the entire popu… proved effective when evaluated …dually, as was true i… limitations proved difficult to overco…e, especially in the face of unexpectedly large, favorab… changes in control sites. As a result, definitive conclusions about the overall effectiveness of the c…i-tywide efforts were not always possible. Nevertheless, in aggregate, these studies support the effectiv…ss of communitywide health promotion, and investigators in the field should turn to different questions. The authors have learned how little they know of the determinants of population-level change and the characteristics that separate communities that change quickly in response to general health information from those that do not. Future studies in communities must elucidate these characteristics, while improving the effectiveness of educational interventions and expanding the role of environmental and health policy components of health promotion. *Am J Epidemiol* 1995;142:576–86.

Use of Child Booster Seats in Motor Vehicles Following a Community Campaign

A Controlled Trial

Beth E. Ebel, MD, MSc, MPH
Thomas D. Koepsell, MD, MPH
Elizabeth E. Bennett, MPH, CHES
Frederick P. Rivara, MD, MPH

Context Once children have outgrown car seats, booster seats protect from injury better than lap and shoulder belts alone. However, the majority of children aged 4 to 8 years use only an adult seat belt.

Objective To evaluate the effectiveness of a multifaceted community booster seat campaign in increasing observed booster seat use among child passengers in motor vehicles.

Design Prospective, nonrandomized, controlled community intervention trial.

Setting and Participants The campaign was initiated in 4 communities in the greater Seattle, Wash, area between January 2000 and March 2001. Eight communities in Portland, Ore, and Spokane, Wash, served as control sites. We observed 3609 booster-eligible children (those aged 4-8 years and weighing 18-36 kg [40-80 lb]).

Main Outcome Measure Observed booster seat use 15 months after the start of the campaign.

Results Before the campaign began, 13.3% of eligible children in the intervention communities and 17.3% in the control communities were using booster seats, adjusting for child age, driver seat belt use, and sex of driver. Fifteen months after the start of the campaign, adjusted booster seat use had increased to 26.1% in the intervention communities and 20.2% in the control communities ($P=.008$ for the difference in time trends between intervention and control communities).

Conclusion These data suggest that a multifaceted community education campaign can significantly increase the use of child booster seats.

JAMA. 2003;289:879-884 www.jama.com

¿Salud Pública Basada en la Evidencia?

Métodos para la Evaluación de las Intervenciones en Salud Poblacional

- Estadísticas vitales (ej., mortalidad)

  Pero… - No proporcionan info sobre morbilidad

  - No datos sobre determinantes

- Datos administrativos (ej., Hª clín. electrónica)

  Pero… - No proporcionan info sobre población no atendida

  - No datos sobre determinantes

- **Encuestas**
  - **Por entrevista** (telefónica, cara a cara)
  - **Con examen**

Encuestas de Salud

- Ventajas
  - Cobertura poblacional
  - Validez
  - Permiten obtener información sobre determinantes
  - (Con examen) proporcionan datos biológicos además de hábitos de vida, socio-demográficos y contextuales
- Desventajas
  - Costes
  - Falta de flexibilidad como mecanismos de evaluación en salud comunitaria

sho W

survey of the health of Wisconsin

University of Wisconsin
SCHOOL OF MEDICINE
AND PUBLIC HEALTH

Taking the pulse of Wisconsin


United States
The Bahamas
Data SIO, NOAA, U.S. Navy, NGA, GEBCO
Image © 2009 TerraMetrics
© 2009 Europa Technologies
© 2009 Tele Atlas
©2009 Google


170.000 km²
5,5 millones de habitantes
87% población blanca
(Alemania, Noruega)
Michigan
Wisconsin
Madison
(~220.000 hab.)
Milwaukee
(~600.000 hab.)
Iowa
© 2009 Google
Image USDA Farm Service Agency
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Objetivos del SHOW

Establecido en el 2008 como infraestructura para la investigación en salud poblacional en Wisconsin

Objetivos Específicos

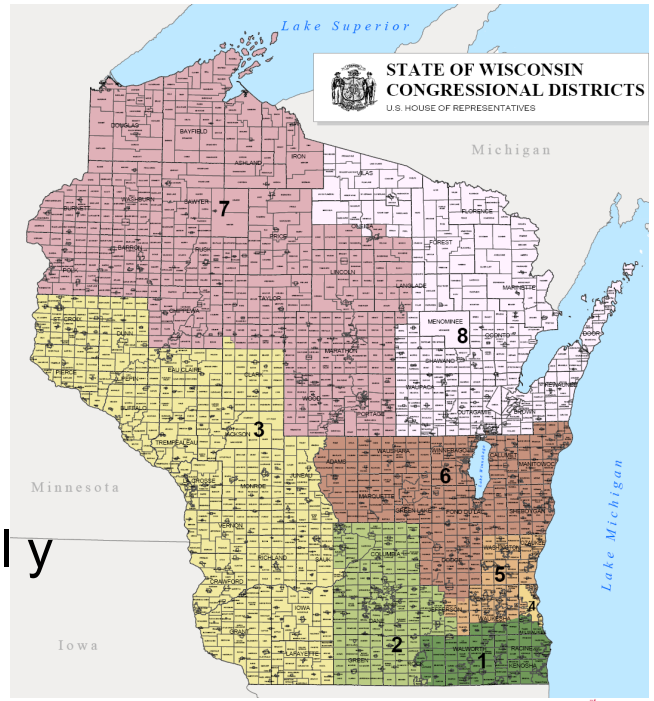
1. Proveer un sistema para la investigación del estado y de las desigualdades en salud de los residentes y comunidades de Wisconsin
2. Mejorar la vigilancia y facilitar la promoción de la salud de los residentes de Wisconsin
3. Facilitatar la *anidación* de proyectos innovadores de investigación en salud poblacional

show survey of the health of Wisconsin

SHOW: La Muestra

- Encuestas de salud anuales (n≈800-1.000) de muestras representativas de los residentes del estado de Wisconsin, edad 21-74 años

- Seleccionados por muestreo aleatorio por conglomerados (bi-etápico)
  1. Bloques censales
     - Probabilidad de selección proporcional al tamaño
     - Estratificados por distrito electoral y nivel de pobreza)
  2. Viviendas (enumeradas)



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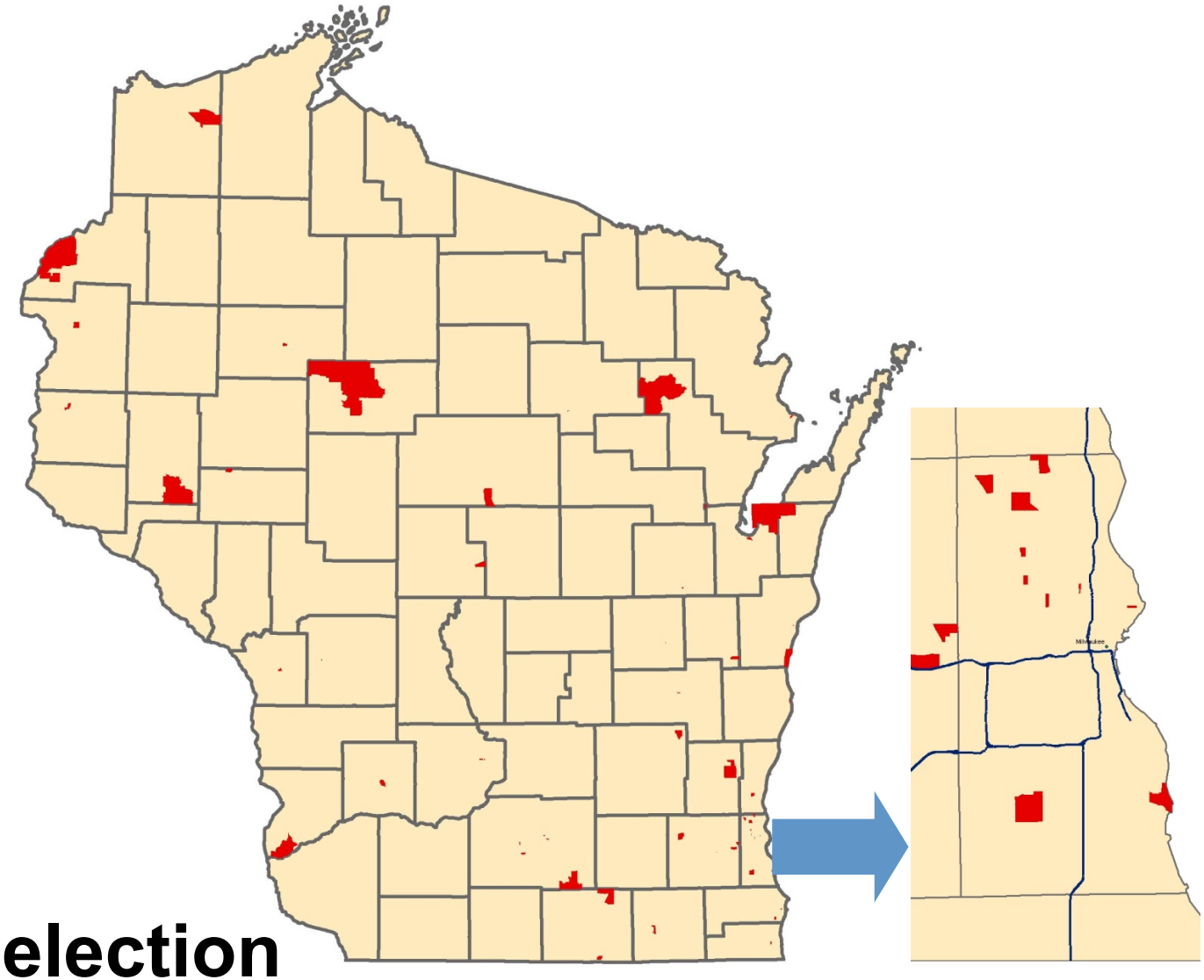
Stage 1: Selection of **Census Blocks Groups** (n=72)



Stage 2: Selection of **Households** (n=28/BG)

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SHOW: La Muestra

- Se visitan las comunidades seleccionadas
- Se contacta con líderes de la comunidad (6-8 semanas antes del trabajo de campo)
- Comunicados de prensa
- Entre los materiales informativos se incluyen cartas de apoyo de los líderes de la comunidad

DAILY CITIZEN

BEAVER DAM, WISCONSIN

It's SHOW time

Health survey crew to visit Horicon, Mayville

MADISON — The University of Wisconsin School of Medicine and Public Health's new research project, the Survey of the Health of Wisconsin (SHOW), began in June to give Wisconsin an on-going health check-up.

Every year, SHOW will meet with Wisconsin residents from all over the state to measure their health.

Next week, it is the turn of Horicon and Mayville residents. Approximately 25 households in Horicon and Mayville have been randomly selected to be invited to participate. SHOW will be recruiting in these communities from Aug. 25 to Sept. 5.

SHOW surveyors will knock on the doors of randomly selected households throughout the state to complete a multi-step in-person health survey. SHOW combines personal interviews, laboratory tests, physical measurements, and community environmental measurements to gather important information on Wisconsinites' health. The information that SHOW compiles will be made available to researchers who are interested in Wisconsin's public health issues.

In order for SHOW's health measurements to be truly representative of Wisconsin's population, the survey randomly selects households from throughout the state. Roughly 1,200 households from neighborhoods in Wisconsin are invited to participate each year.

"SHOW aims to present a picture of health of the people in Wisconsin," said Dr. F. Javier Nieto of the University of Wisconsin's School of Medicine and Public Health and Director of the SHOW. "Our vision is that the information that SHOW collects through the years will play an important role in monitoring the health of the people of Wisconsin, and in guiding planning of community and statewide health services."

See SHOW/Page C12

Submitted

In addition to Survey Centers in Middleton and Milwaukee, SHOW operates two Mobile Survey Centers to easily reach participants from all areas of Wisconsin.

CHECK-UP TIME!

WHAT: The Survey of the Health of Wisconsin, or SHOW, is an ongoing statewide public health research project, which launched just this past June.

SHOW will visit approximately 1,200 households around the state each year to recruit a representative sample of adult Wisconsinites in an ongoing effort to measure the health of Wisconsin residents.

LOCALLY: Approximately 25 households in Horicon and Mayville have been randomly selected to be invited to participate. SHOW will be recruiting in these communities from Aug. 25 to Sept. 5.

SHOW

Continued from Page C5

Study participants will be interviewed in their homes, have some brief physical measurements and give blood and urine samples at SHOW's specially designed Mobile Survey Center, which will travel the state to easily reach participants. All the individual information collected by SHOW will be kept confidential.

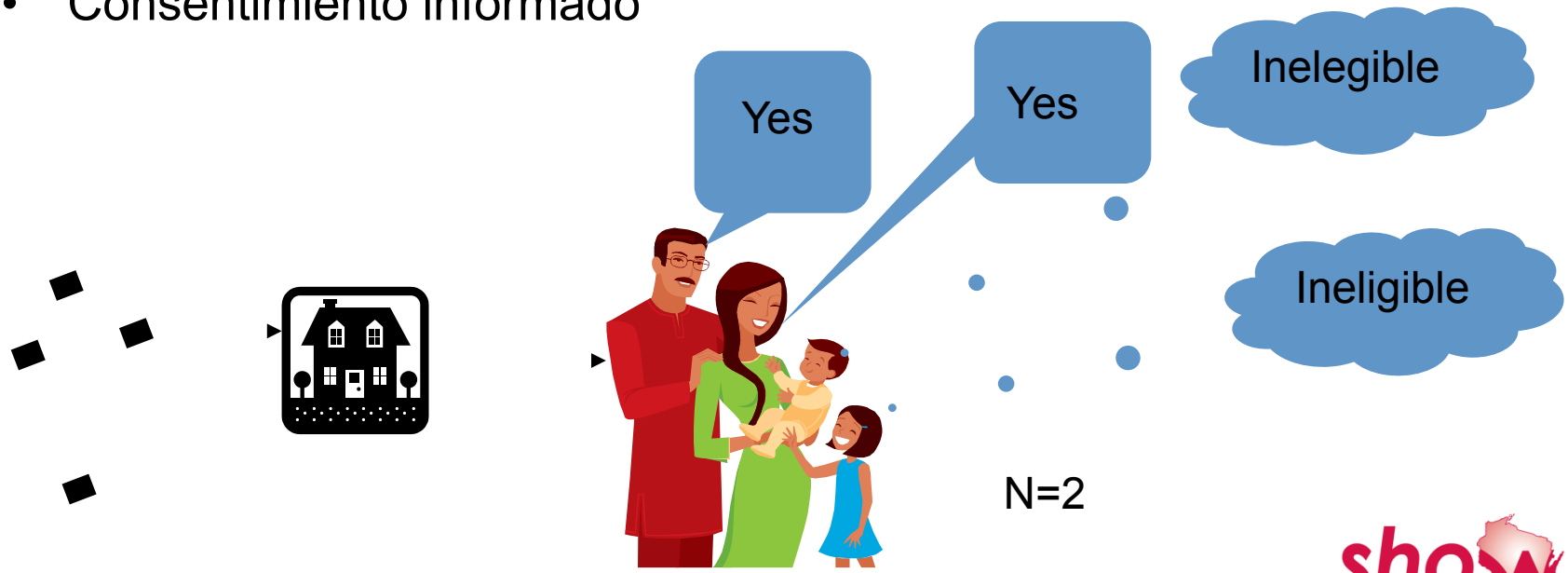
"SHOW will immediately provide us with current health and prospective clinical information never before available in Wisconsin," said Dr. Henry Anderson, Chief Medical Officer for the state Bureau of Environmental and Occupational Health in the Division of Public Health. "The results of this survey and clinical examinations will measure the current health status of all Wisconsin residents. This survey will make us more equipped than ever before to develop initiatives to help make Wisconsin healthier than ever."

The SHOW research project is modeled after the CDC's National Health and Nutrition Examination Survey, which has provided key health information about the nation's health for over 40 years. With the launch of SHOW, Wisconsin will be the first state to monitor the health of its residents with a survey of this magnitude. Using NHANES as a guide, SHOW is specially designed for the Wisconsin population by including regionally important health measures, such as local environment assessments and Great Lakes fish consumption.

SHOW: La Muestra

Selección de los indivíduos en cada vivienda

- Vivienda seleccionada recibe una carta con antelación
- Visita en persona por un encuestador de campo entrenado→cribado y censo de la vivienda
- Todos los residentes en rango de edad son invitados
- Incentivos de participación ($95, camiseta, resultados)
- Consentimiento informado



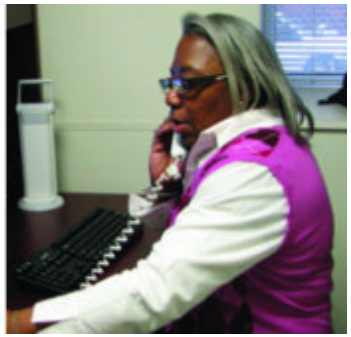
SHOW: Recogida de Datos

show survey of the health of Wisconsin

SHOW: Recogida de Datos

survey of the health of Wisconsin





SHOW: La Información

- Información a nivel individual
  - Entrevista en domicilio y en clínica (CAPI)

    Datos sociodemográficos, calidad de vida, hábitos, hª médica y familiar, hª reproductiva, estrés, percepción de discriminacion, salud mental, salud oro-dental, acceso/uso de servicios sanitarios, cribado y prevención, percepción sobre comunidad, medicamentos, función cognitiva, *health literacy*

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SHOW: La Información

- Información a nivel individual
  - Examen físico en la clínica
    - Peso/talla, circumferencias cintura y cadera
    - Presión arterial
    - Función respiratoria (*peak flow meter*)
    - Análisis de impedancia bioeléctrica (*BIA*)
  - Muestras biológicas:
    - Recuentos, glucemia, Hb glicosilada, colesterol, HDL, creatinina
    - Plasma, suero, AND para almacenamiento a largo plazo (-80ºC)
    - Orina

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SHOW 2008-09: Datos Descriptivos

(n=611)

Demographic Characteristic		SHOW 2008-09* (%)	WI ACS 2005-07 (%)
Female		50.0	50.3
Age	21-34 years	23.1	27.9
	55-74 years	27.6	26.3
Race	White	86.1	88.7
	African American	6.1	6.4
	Asian	2.9	2.2
	American Indian	1.4	1.4
	Other	3.2	2.7
Education	Less than HS	10.6	11.5
	College or more	33.6	25.1
Annual household income	<$25k	18.1	22.7
	≥$100k	15.9	15.6

* Datos ponderados de acuerdo al diseño de muestreo en conglomerados

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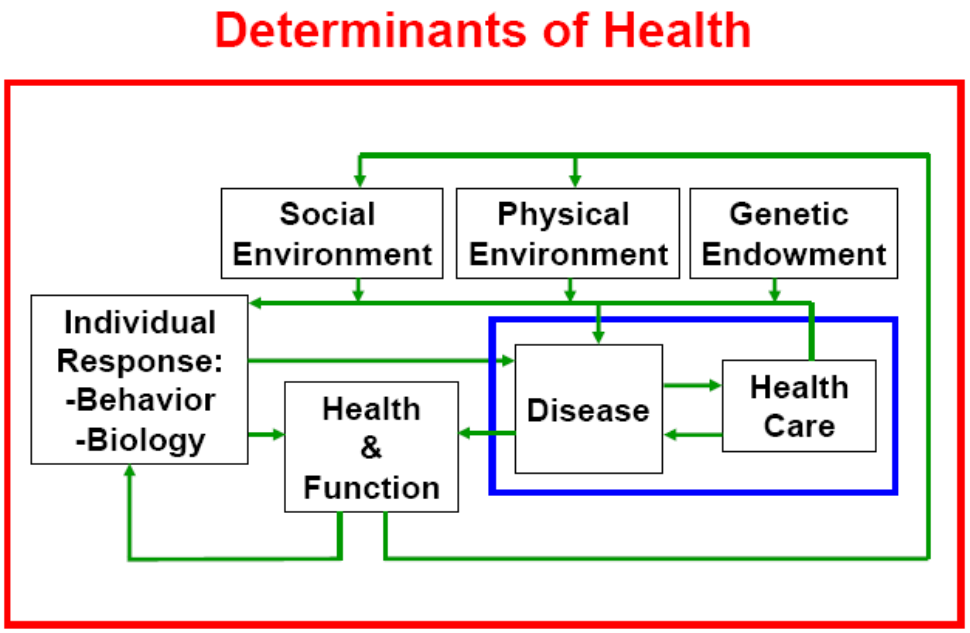
SHOW: La Información

- Información a nivel individual
  - Encuesta basal
  - Seguimiento:
    - Encuesta telefónica (2 años después de basal)
    - Ingresos hospitalarios
    - Certificados de defunción

show
survey of the health of Wisconsin

SHOW: La Información

- Información a nivel individual
- Información a nivel de la comunidad



Énfasis en los determinantes *contextuales* de la salud poblacional y las desigualdades en salud

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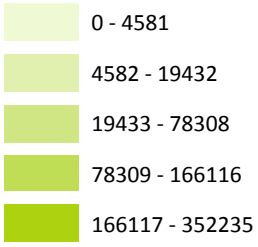
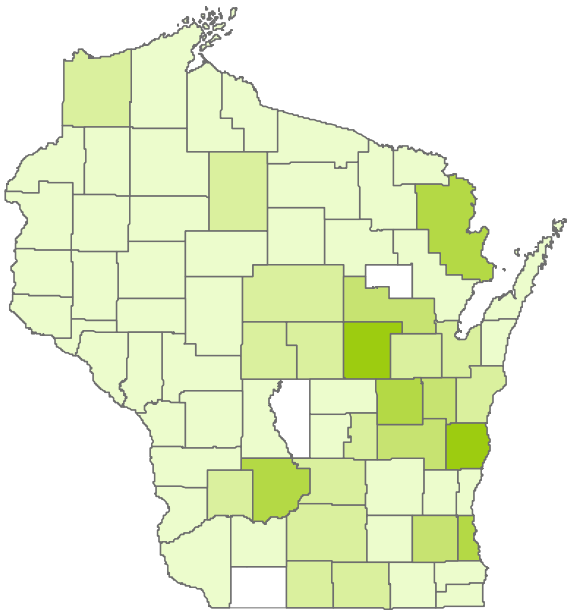
SHOW: La Información

- Información a nivel individual
- Información a nivel de la comunidad:
  - Características socio-demográficas de la familia
  - Calidad de la vivienda
  - Geo-codificada y ligada a datos medioambientales:
    - Calidad de aire y agua

County Benzene Emissions from Industrial Sources (lb), 2000-2005)



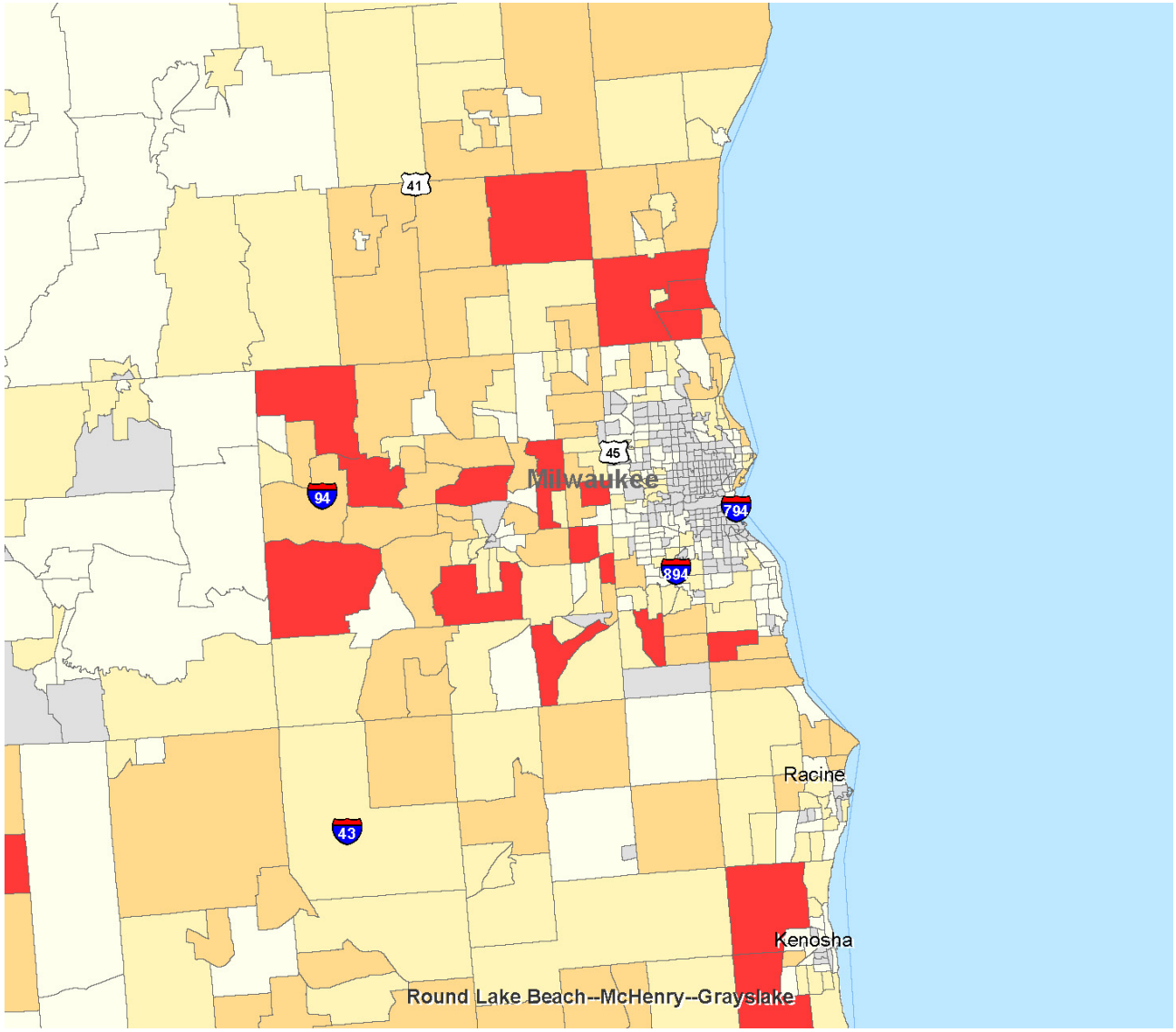
Source: WI AEMS Database



show survey of the health of Wisconsin

Fresh Fruit & Vegetable Consumption Index

Milwaukee & Suburbs – Census Tracts



Color Ramp

Grey –Lowest

White-Low

Cream-Medium

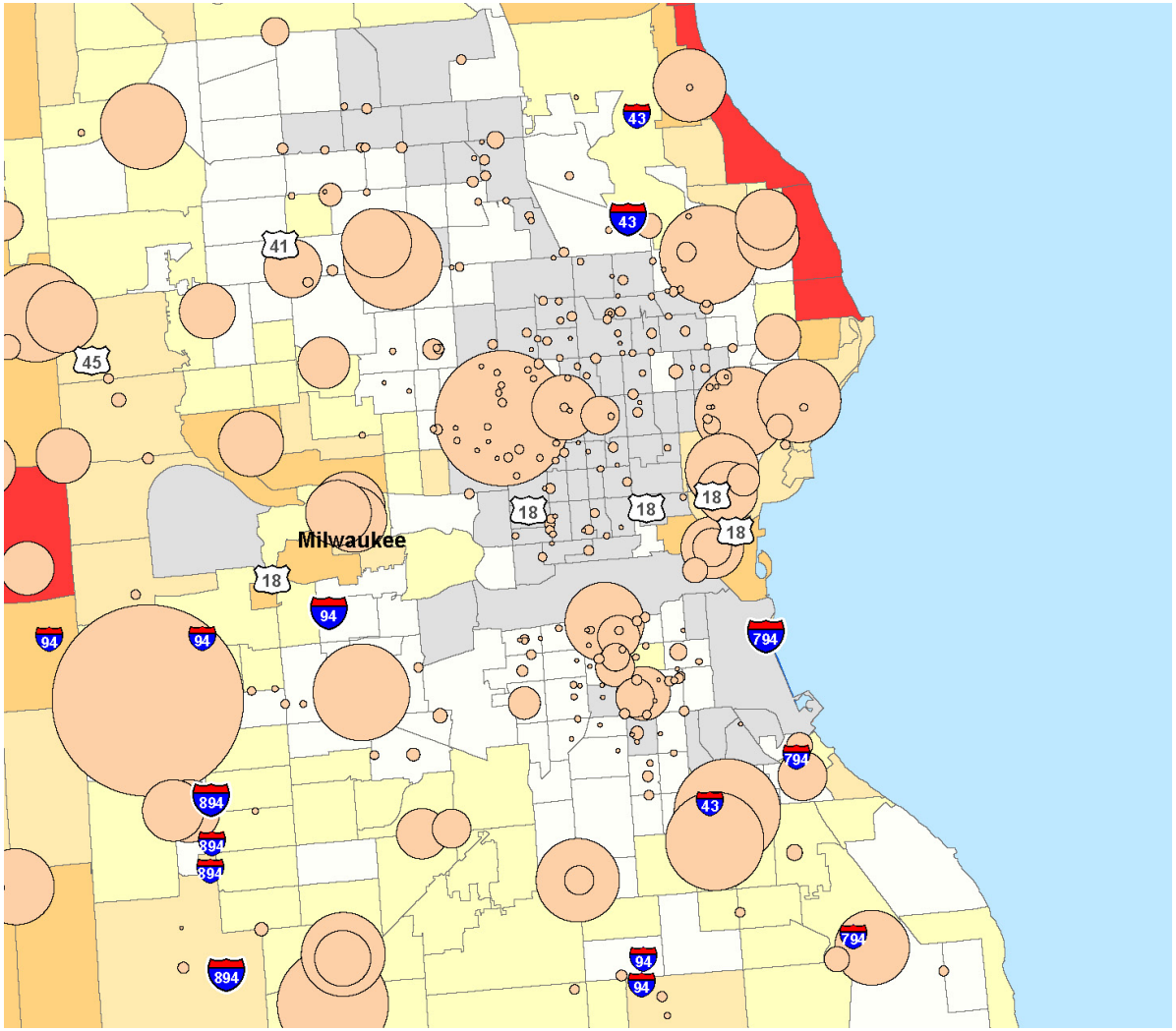
Yellow-High

Red-Very High

Source:

ESRI / BLS Consumer Expenditure Survey

Fresh Fruit & Vegetable Consumption Index
With Individual Store Location / Sales Volume
Milwaukee & Suburbs – Census Tracts



Color Ramp
Grey –Lowest
White-Low
Cream-Medium
Yellow-High
Red-Very High

Circle size = store sales volume

Source:
ESRI / BLS Consumer Expenditure Survey

SHOW: La Información

- Información a nivel individual
- Información a nivel de la comunidad:
  - Características socio-demográficas de la familia
  - Calidad de la vivienda
  - Geo-codificada y ligada a datos medioambientales:
    - Calidad de aire y agua
    - Características de la comunidad
    - Normativas locales (ej., espacios libres de humo)
    - Programas en escuelas, comunitarios
    - Datos de ventas de productos relevantes para la salud
    - Uso del suelo, diseño urbanístico, patrones de tráfico
    - WASABE

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SHOW Wisconsin Assessment of the Social and Built Environment

- WASABE: un instrumento de observación directa
- Se identifican/miden caractrísticas del ambiente urbano o del barrio que pueden incentivar/desincentivar la actividad física y/o la interacción social

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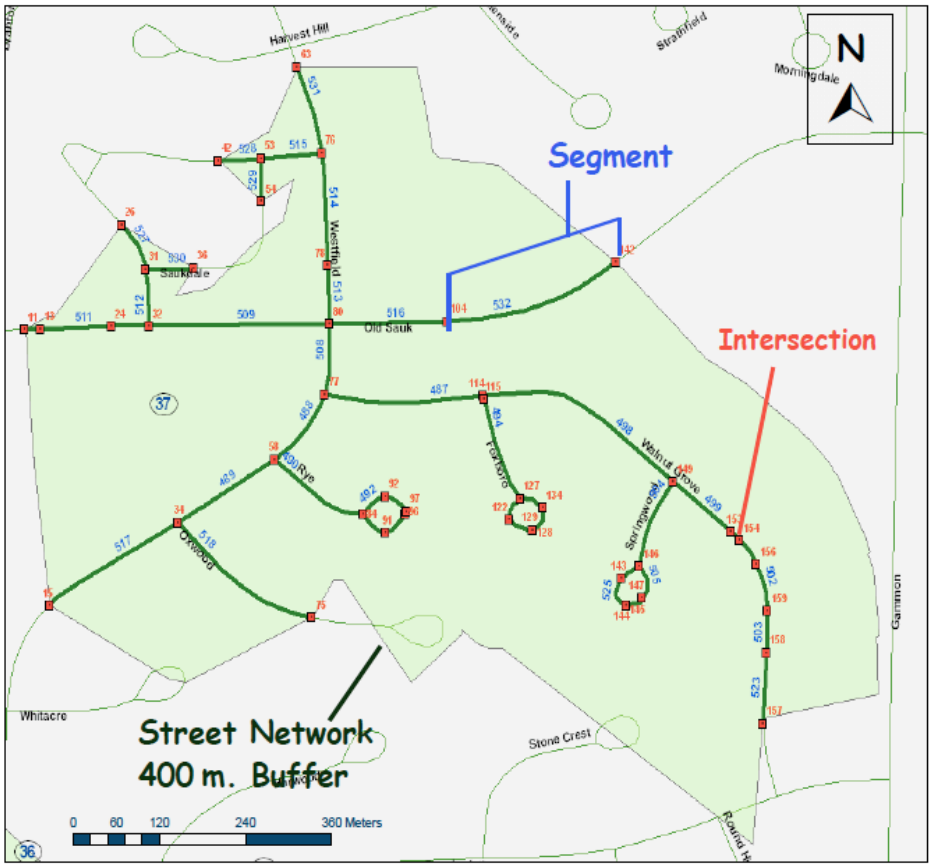
SHOW Wisconsin Assessment of the Social and Built Environment

- Se usa *ArcGIS* para definir una zona (*buffer)* de 400 metros alrededor de cada uno de las viviendas seleccionadas
- Se definen “segmentos” de calle con arreglo a criterios pre-establecidos
- Cada segmento es examinado por personal de campo entrenado



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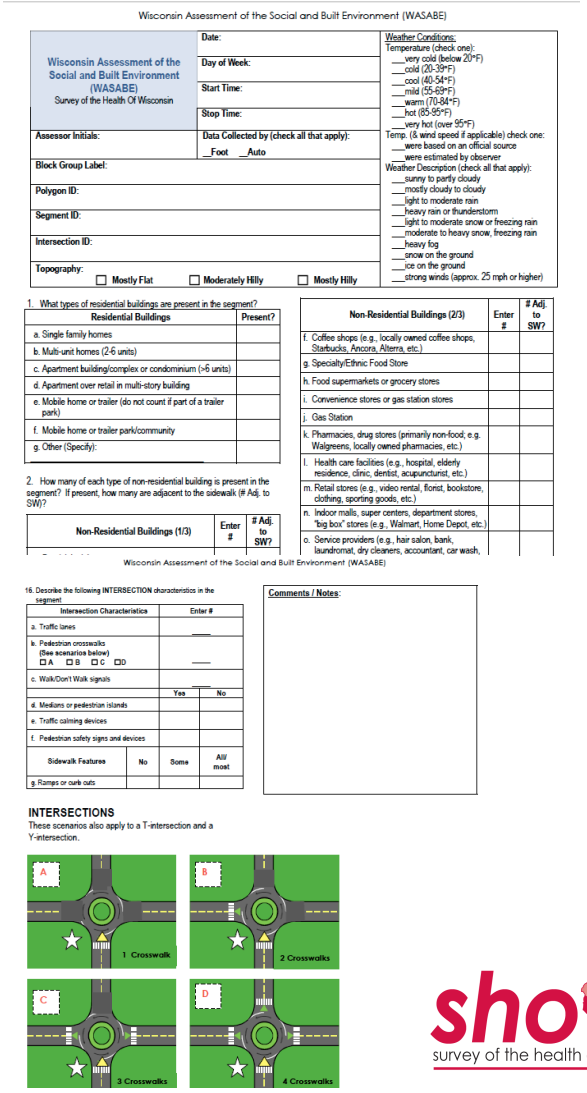
SHOW Wisconsin Assessment of the Social and Built Environment

El instrumento cubre las siguientes áreas:

- Uso predominante del suelo
- Disponibilidad de areas de recreo
- Número y tipo de locales que no sean domicilios
- Seguridad viaria para peatones
- Estética, vegetación, limpieza
- Ambiente social
- Presencia de gente haciendo ejercicio físico



Wisconsin Assessment of the Social and Built Environment (WASABE)

Wisconsin Assessment of the Social and Built Environment (WASABE)
Survey of the Health Of Wisconsin

Date:
Day of Week:
Start Time:
Stop Time:
Assessor Initials:
Data Collected by (check all that apply): _Foot _Auto
Block Group Label:
Polygon ID:
Segment ID:
Intersection ID:
Topography: ☐ Mostly Flat ☐ Moderately Hilly ☐ Mostly Hilly

Weather Conditions:
Temperature (check one):
___very cold (below 20°F)
___cold (20-39°F)
___cool (40-54°F)
___mild (55-69°F)
___warm (70-84°F)
___hot (85-95°F)
___very hot (over 95°F)
Temp. (& wind speed if applicable) check one:
___were based on an official source
___were estimated by observer
Weather Description (check all that apply):
___sunny to partly cloudy
___mostly cloudy to cloudy
___light to moderate rain
___heavy rain or thunderstorm
___light to moderate snow or freezing rain
___moderate to heavy snow, freezing rain
___heavy fog
___snow on the ground
___ice on the ground
___strong winds (approx. 25 mph or higher)

1. What types of residential buildings are present in the segment?

Residential Buildings	Present?
a. Single family homes	
b. Multi-unit homes (2-6 units)	
c. Apartment building/complex or condominium (>6 units)	
d. Apartment over retail in multi-story building	
e. Mobile home or trailer (do not count if part of a trailer park)	
f. Mobile home or trailer park/community	
g. Other (Specify):	

Non-Residential Buildings (2/3)	Enter #	# Adj. to SW?
f. Coffee shops (e.g., locally owned coffee shops, Starbucks, Ancora, Alterra, etc.)		
g. Specialty/Ethnic Food Store		
h. Food supermarkets or grocery stores		
i. Convenience stores or gas station stores		
j. Gas Station		
k. Pharmacies, drug stores (primarily non-food; e.g. Walgreens, locally owned pharmacies, etc.)		
l. Health care facilities (e.g., hospital, elderly residence, clinic, dentist, acupuncturist, etc.)		
m. Retail stores (e.g., video rental, florist, bookstore, clothing, sporting goods, etc.)		
n. Indoor malls, super centers, department stores, "big box" stores (e.g., Walmart, Home Depot, etc.)		
o. Service providers (e.g., hair salon, bank, laundromat, dry cleaners, accountant, car wash,		

2. How many of each type of non-residential building is present in the segment? If present, how many are adjacent to the sidewalk (# Adj. to SW)?

Non-Residential Buildings (1/3)	Enter #	# Adj. to SW?

Wisconsin Assessment of the Social and Built Environment (WASABE)

16. Describe the following INTERSECTION characteristics in the segment.

Intersection Characteristics	Enter #	
a. Traffic lanes	____	
b. Pedestrian crosswalks (See scenarios below) ☐A ☐B ☐C ☐D	____	
c. Walk/Don't Walk signals	____	
	Yes	No
d. Medians or pedestrian islands		
e. Traffic calming devices		
f. Pedestrian safety signs and devices		

Sidewalk Features	No	Some	All/ most
g. Ramps or curb cuts			

Comments / Notes:

INTERSECTIONS
These scenarios also apply to a T-intersection and a Y-intersection.

SHOW: La Información

- Información a nivel individual
- Información a nivel de la comunidad
- Estudios anidados (*ancillary*)
  - Estudios epidemiológicos
    - Ej., determinantes of niveles séricos de Vit. D
    - Ej., salud/calidad de vida de personas que cuidan la salud de otros (familiares)
  - Añadido de módulos
    - Ej., examen de salud dental (DSP Wisconsin)
    - Ej., estudio del medio ambiente nutricional

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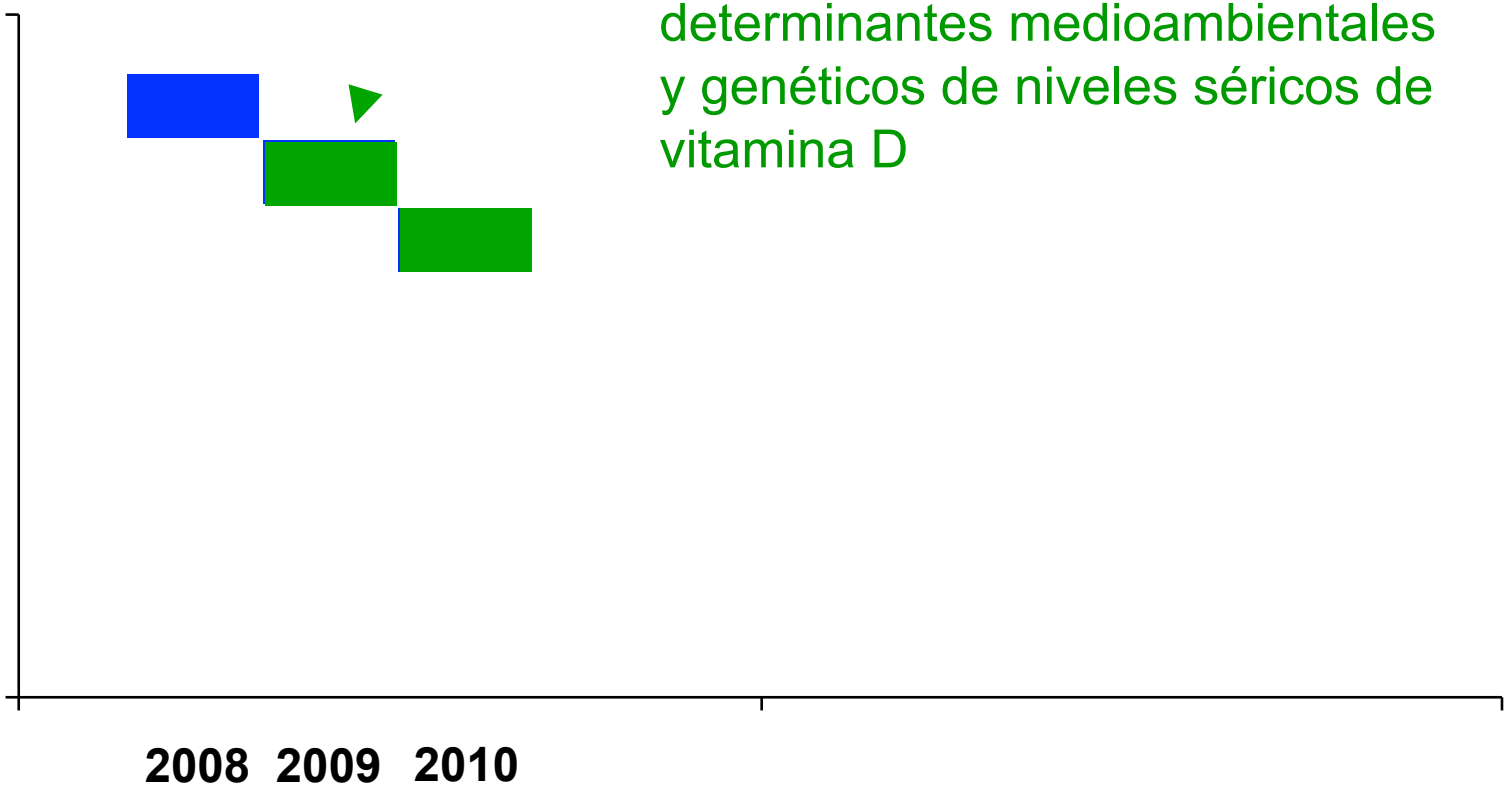
SHOW Estudios Anidados

Ej. en 2008, Engelman obtiene financiación para un estudio de los determinantes medioambientales y genéticos de niveles séricos de vitamina D



SHOW Estudios Anidados

Ej. en 2009, Nitzke (Nutritional Sciences), Amy Meinen (DSP) y Nieto obtienen financiación realizar una encuesta del "ambiente nutricional" (NEMS) en las comunidades seleccionadas por SHOW

SHOW: La Información

- Información a nivel individual
- Información a nivel de la comunidad
- Estudios anidados (*ancillary*)
  - Estudios epidemiológicos
  - Añadido de módulos
  - Evaluación de intervenciones de salud comunitaria (*mini-SHOWs*)
    - Ej., LaCrosse/Wood County (CDC's *Communities Putting Prevention to Work*)

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SHOW Estudios Anidados

2010	LaCrosse y Wood County reciben beca del CDC para establece un programa comunitario para mejorar nutrición y actividad física
2011	*Mini-SHOW* en LaCrosse/Wood antes del programa (conductas, IMC, WASABE, NEMS)
2011-12	El programa es llevado a cabo
2013	Se repite el Mini-SHOW en LaCrosse/ Wood Co.

Permite una evaluación rigurosa de la efectividad del programa:

- Antes y después de la intervención en LaCrosse/Wood
- Comparación con las tendencias estatales

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Conclusiones

- Una actividad de salud pública eficiente y *basada en la evidencia* requiere información tanto sobre *resultados* como sobre los *determinantes* de salud
- Las encuestas de salud constituyen uno de los métodos más rigurosos para la *identificación de desigualdades en salud* (individual/comunitaria)
- Propiamente diseñadas, las encuestas de salud pueden constituirse en infraestructura para la *evaluación de programas de salud pública* a nivel nacional, regional o local.