



HEART HEALTHY HOODS



El Modelo de I+D+i para Madrid

6 de Junio, Asamblea Madrid

Ciudades más saludables, más felices: Desigualdades y Ciencia Ciudadana



Manuel Franco MD, PhD
Universidades Alcalá y Johns Hopkins



I+D+I en Salud Urbana



1. En 2050: 66% de la población vivirá en ciudades.
2. Reto de la cronicidad y sus factores de riesgo en la ciudad.
3. Factores importantes como la pobreza, el desempleo y las condiciones de trabajo muy patentes en la ciudad.
4. Desigualdades socioeconómicas en nuestras ciudades.
Segregación. Desigualdades en Salud.
5. Ciudad, municipio, barrio como oportunidad para realizar mejoras estructurales que mejoren la salud de millones.¹
6. Investigación en Salud Urbana mediante nuevos datos, nuevas metodologías, nuevos equipos interdisciplinarios.
- 7. Ciencia Ciudadana: Generar evidencia y actuar**



Ciudades más saludables Ciudadanos más felices



ANÁLISIS

Baltimore, ejemplo de la desigualdad

Baltimore retrata décadas de desigualdad en Estados Unidos
Tu barrio puede perjudicar seriamente la salud

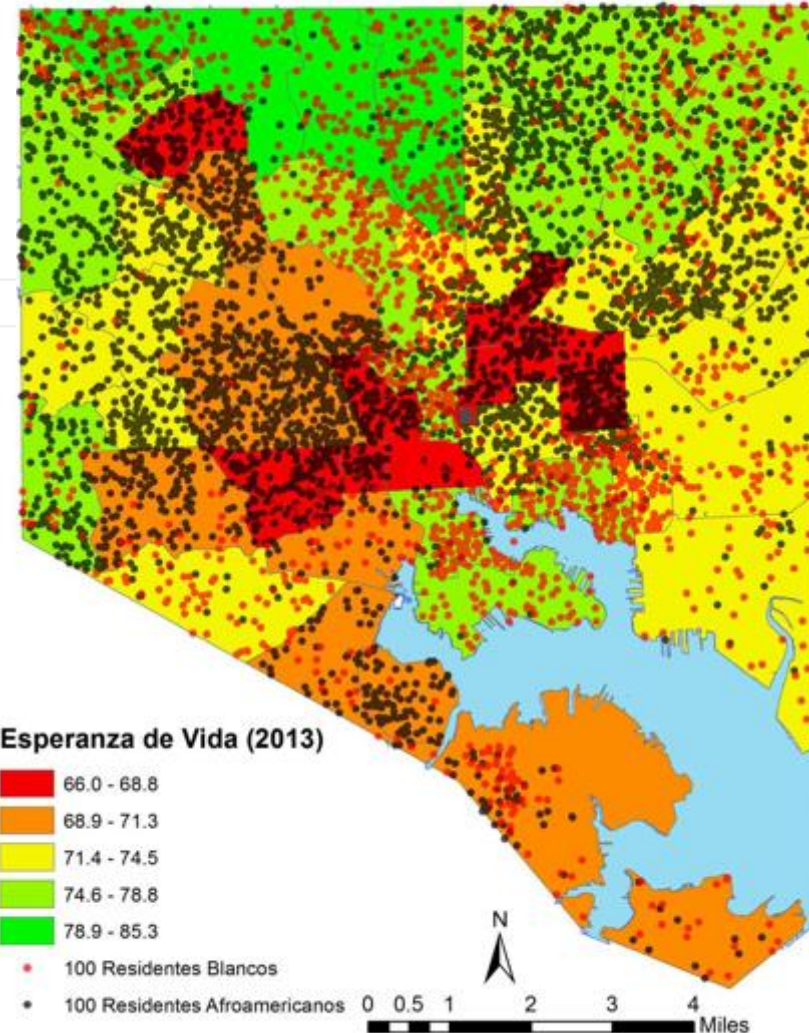
MANUEL FRANCO, USAMA BILAL Y RICHARD COOPER | 4 MAY 2015 - 17:40 CEST

Life expectancy in high income neighborhood: 85 years

Life expectancy in low income neighborhood: 66 years

Baltimore life expectancy gap by neighborhoods: 18 years

Segregacion y Esperanza de Vida en Baltimore





EL PAÍS

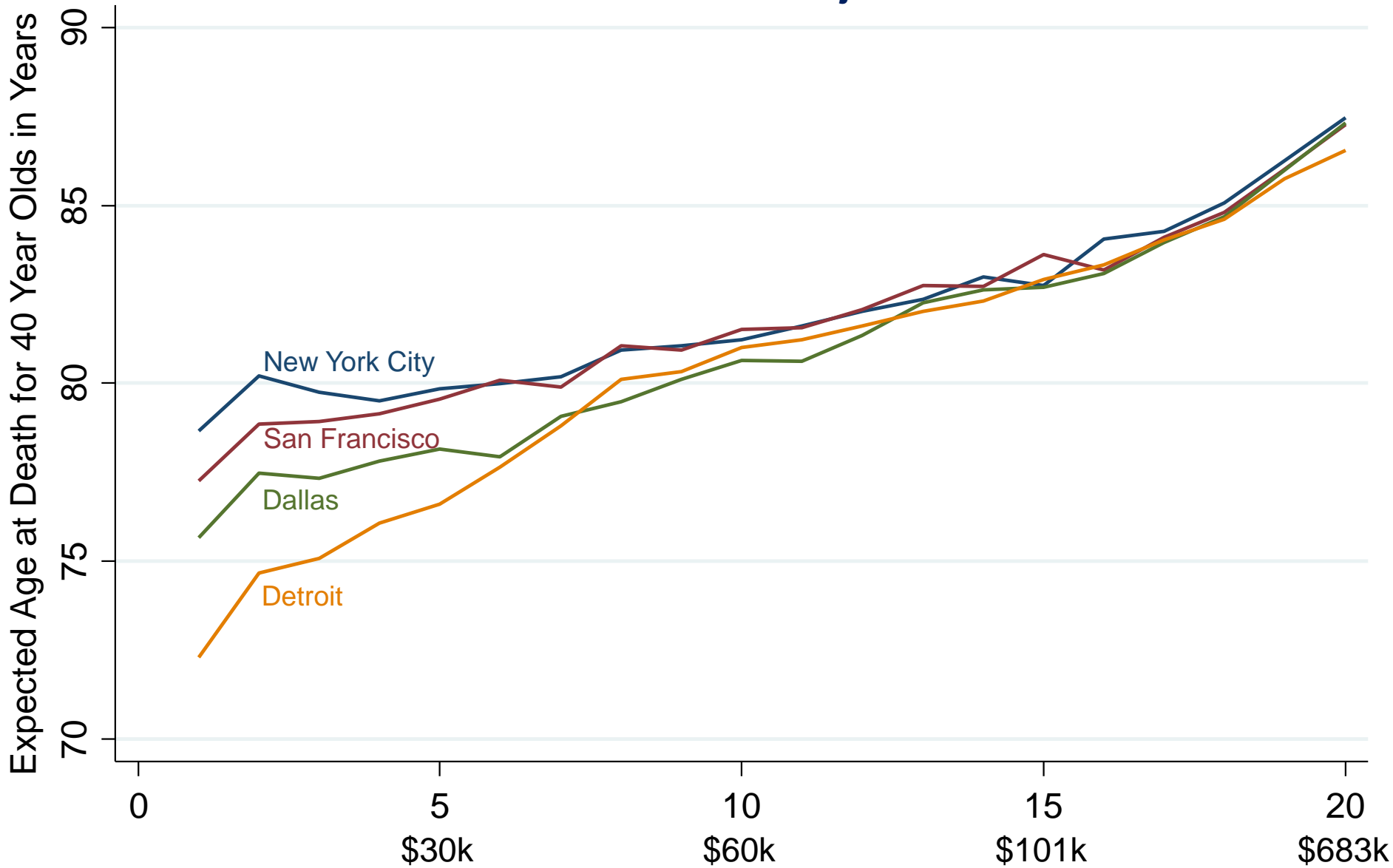
Franco, Bilal and Cooper, May 4th 2015

Como en el caso de Baltimore, es de radical importancia conocer los procesos que nos han llevado a la situación actual.

La conjunción de políticas públicas desacertadas deriva en ciudades en las que conviven dos realidades muy distintas, creando barrios en los que se perpetúan el ciclo de pobreza, la falta de oportunidades y futuro para los jóvenes, y la mala salud de sus residentes.

¿Tenemos la voluntad para crear ciudades más justas, más saludables, más libres y unidas y finalmente más felices?

Race-Adjusted Expected Age at Death vs. Household Income for Men in Selected Major Cities



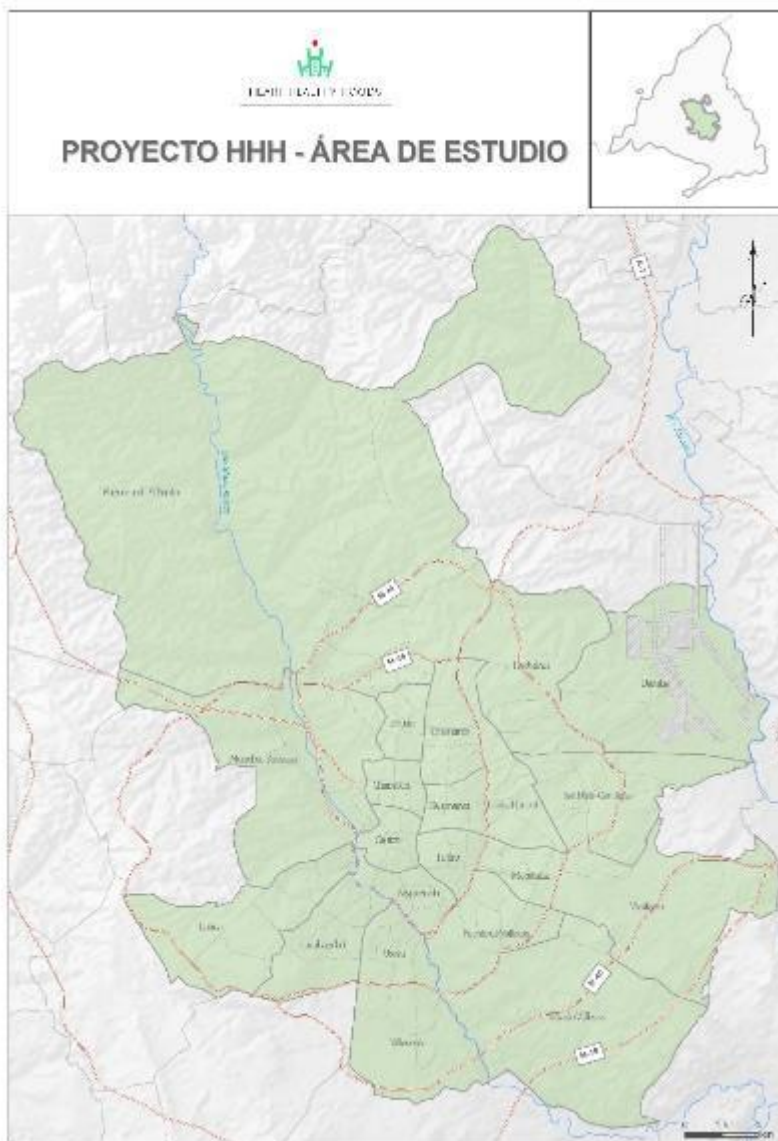
Income and life expectancy in the US. Chetty, JAMA 2016



And now we
come back to
study Madrid



Ciudades más saludables, más igualitarias



Life expectancy in high income neighborhood: 85 years

Life expectancy in low income neighborhood: 78 years

Madrid life expectancy gap by neighborhoods: 7 years



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Social and Physical Urban Environment and CV Health: The Much Needed Population Approach



Manuel Franco MD, PhD
For the HHH investigators

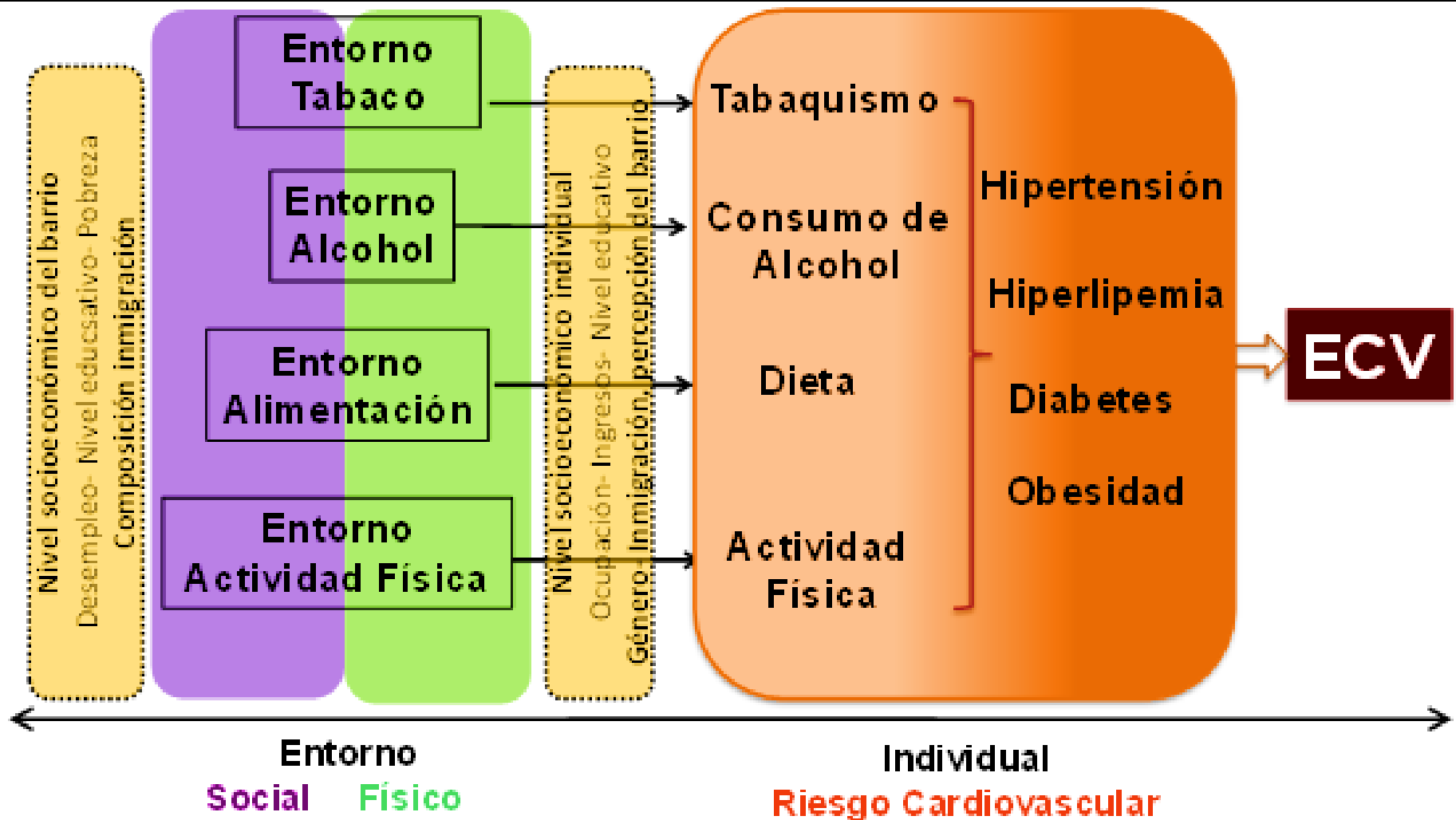
ERC Starting Grants

FUNDING	1.5 million € for 5 years
OBJECTIVE	To encourage independent careers of excellent investigators providing enough support in the critical moment (starting to develop their own team).
ELEGIBILITY	PI must have a PhD degree in the last 2 to 7 years. <u>Available to non-EU researchers.</u>
REQUISITES	At least one relevant publication without his/her thesis advisor At least 50% effort
PROFILE	High potential, project with potential social Impact in Europe.



Marco conceptual HHH

Barrios Cardio Saludables





Heart Healthy Hoods Overall Objectives



To study the impact of the
social and physical environment in terms of
tobacco, alcohol, food and physical activity
on residents **cardiovascular health**



HHH overarching objective: Policy and research implications



To provide scientific evidence to **the general population, researchers and policy makers to intervene at the population level to prevent the first cause of death in Europe**



Interdisciplinary team

PI: Social Epidemiology



Geography

University of Alcalá
London School of Hygiene and Tropical Medicine

Health Sociology

University of Salamanca
Johns Hopkins School of Public Health

Primary Care System

Primary Care Research Unit, Madrid

Epidemiology

University of Alcalá
Johns Hopkins School of Public Health

Photography
Knowledge Dissemination
Citizen Science



HHH Team September 2014 Kick off Meeting, 25 people





21 Districts

128 Neighborhoods

2412 Census Units

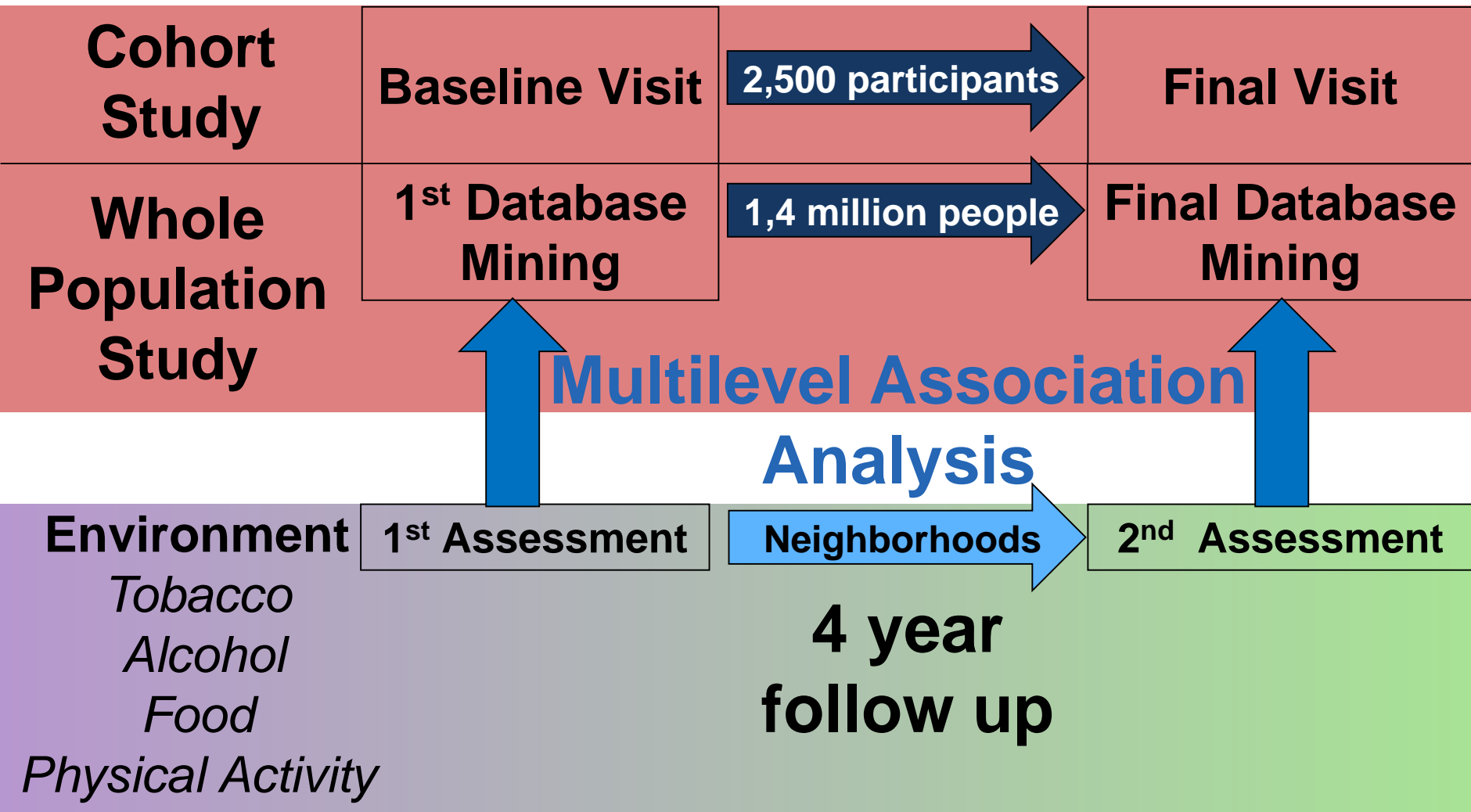
3,2 Mill. Residents

Access to the
Integrated Primary
Care Health System
Database

1,4 million residents
40-75 ys. old



HHH Study Design







Heart Healthy Hoods



13th International Conference of Urban Health (ICUH) San Francisco April 2016





Methods (quantitative)



- **Cardiovascular Disease:**
 - Whole population (>99%) EHR through universal health system.
 - Validated (1) data on physician-diagnosed: diabetes, hypertension, dyslipidemia, smoking and obesity.
- **Urban environment**
 - Food: location and type of food stores and food services, directly measured healthy food availability (brief NEMS-S)
 - Physical activity: SPACES audit tool for walkability and bikeability, SOPARC audit tool for open spaces.
 - Alcohol and tobacco: location and type of retailers

References: (1) de Burgos Lunar et al, BMC Med Res Methodol, 2013.



Methods (qualitative)



- 11 semi-structured interviews with key informants: 4 long-term residents, 2 recent immigrants, 1 teacher, 1 community activist, 1 health care provider, 1 public health officer, 1 local food store owner
- Questions on health and the environment, focusing on sociodemographics, food, alcohol, tobacco and physical activity.
- Analysis by triangulation incorporating an interpretative phenomenological analysis.



Methods (integration)



- Geographic Information Systems
 - Directly collected data + Secondary administrative data
 - Joined to street sections by relational union or overlaid as administrative boundaries/blocks.
- Mixed Methods Approach: merging approach
 - Provides insights on quantitative findings
 - Quantitative -> qualitative
 - Guides future quantitative data collection (formative)
 - Qualitative -> quantitative.



SaludMadrid

Centro de Salud
Daroca



Comunidad de Madrid

NICOR

WAP





Exploratory Study Sociodemographic Profile Primary Health Care Records



- Total Pilot Area Population: 15,751
- Population in the Primary Care Health System Geocoded to census section level: 14,857 (95%)
 - ***Possibility of obtaining data for 2 million people***
- Median Age: 44 (Range: 0 to 106)
 - 49% Above 45 years (CVD Health Target Group)
- Sex: 55% Women (65% in >75 years)
- Primary Care Health Centers: 98% in 3 centers
- Education: 50% > primary education
- Immigration: 19% foreign-born



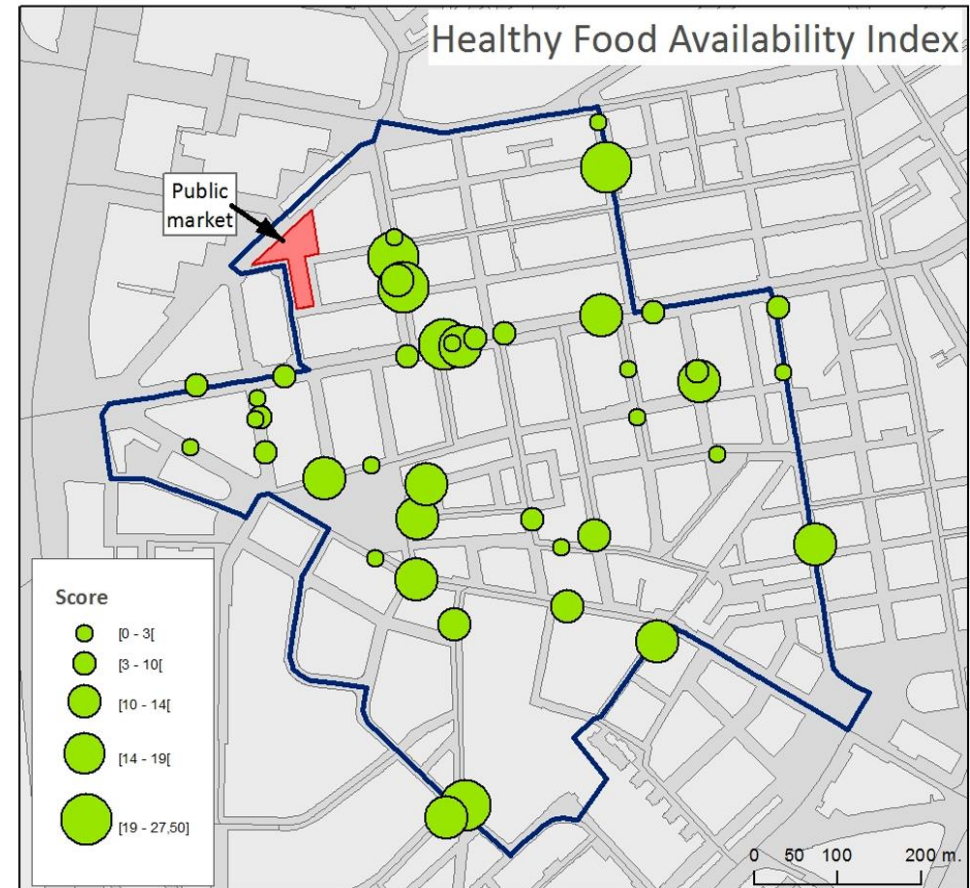
Exploratory Study Cardiovascular Profile Primary Health Care Records



- Population 45-106 ys. old: 7,252
- Sex: 59% Women
- Diabetes Prevalence: 12%
- Diabetes Control (HbA1c<7): 63%
- Hypertension Prevalence: 34%
- Obesity (BMI >30): 20%
- Dyslipidemia, all types: 32%



Results



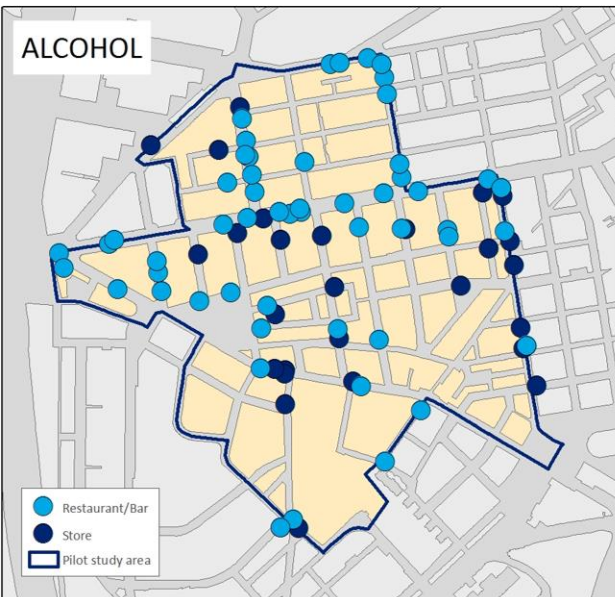


Results



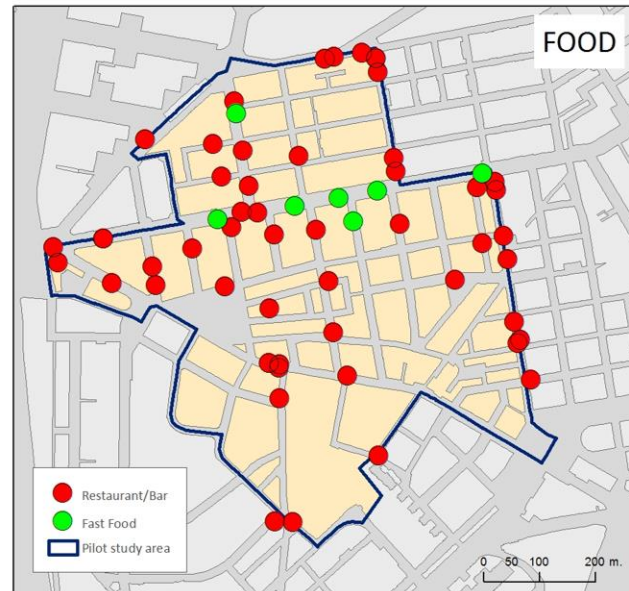
Alcohol

(Restaurants and Liquor Stores)



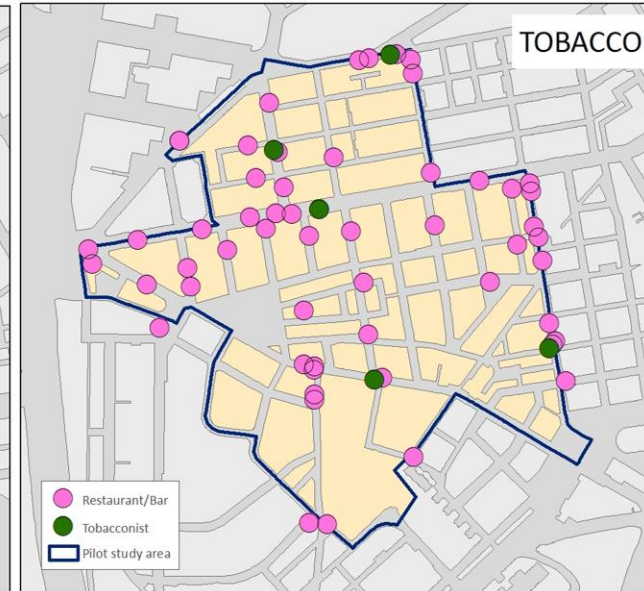
Food Services

(Bars, Restaurants and Fast Food)



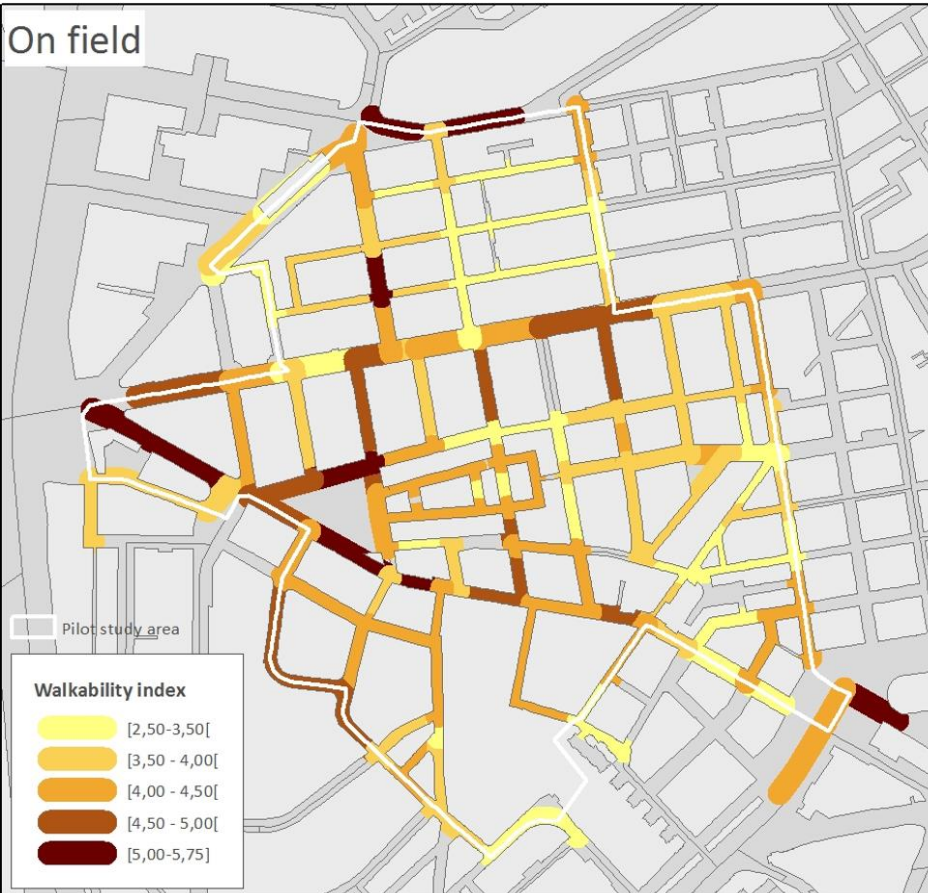
Tobacco

(Vending Machines & Stores)





Physical Activity Results



Pedro Gullón et al. September 2015 Journal of Urban Health



Pilot Qualitative Study

Emergent categories



The role of immigration in shaping behavior patterns related to the use of open spaces *"... In the past other people would go there [park], but now the Romanians are there..." (men, < 65 years)*





Pilot Qualitative Study

Emergent categories



The current economic crisis shaping the neighbor's behaviors *"... Nowadays there are a lot of grandparents taking care of the family.... Many unemployed descendants. So there is little time for healthy habits like exercise..." (health care provider, woman)*





Pilot Qualitative Study

Emergent categories



The role of social networks shaping health behavior patterns in residents *"I'm happy with people in my neighborhood. Since my husband died, ... adults and kids alike, boys like my sons, 50 years-old, [have told me] 'hey, I work on this, if I can help you... I will help you with stuff if you ask me' "* (woman, > 65 years)





European Research Council
Established by the European Commission

ideas

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SEPTEMBER 2015



Newsletter of the European Research Council

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about ERC calls

Research in the spotlight
It's time for citizen science

What's new
Impact of Starting
Grants revealed



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Citizen Science



General public engagement in scientific activities

Citizens actively contribute to science with their intellectual effort.

Volunteers acquire new learning and skills, and deeper understanding of the scientific work in an appealing way.

As a result of this open, networked and trans-disciplinary scenario, Society-Science-Policy interactions are improved leading to a more democratic research based on evidence-informed decision making.



HEART HEALTHY HOODS



Understanding community food environment through Photovoice: a participatory action research project in Madrid

Julia Díez, Paloma Conde, María Sandín, María Urtasun, Remedios López, Joel Gittelsohn and Manuel Franco

PhotoVoice is a project co-funded by

FUNDACIÓN MAPFRE



What is Photovoice?



- Innovative participatory-action research method
- It enables people to identify, capture, and reflect their community's strengths and concerns through photography
- Relevant scientific data for urban health
- Informs policy makers to promote health-related public policies





● Ángel Frías



● Amador Silebo



● Daniel Rafael Mato



● José Luis Carrero



● Christine Funrock



● Esther Ortiz



● Juani Moreno



● Mercedes Bellot



● Isabel Masa



● Mª Soledad Olivo



● Mercedes Rivera



● Zakia El Khamlichi



● Beatriz Criado



● Juana Carulli



● Sagrario Gómez



● Encarnación Franco



● Rosa Arana



● Encarna Dopido



● Javier Rubio



● Florian Gómez



● Julio Ahijado



● Ángel Montiel



● Armando Cáceres



● Pablo Benito



● Manuel Franco



● Paloma Conde



● Roberto Valiente



● Francisco Escobar



● Alba Cebrecos



● Víctor G. Carreño



● María Urtasun



● Julia Díez



● Ana María Olea



● Elena Ojeda



● María Sandín



● César García



● Remedios López



● Juanjo Palomares



● Matilde Pumarino



● Santiago Sancho



● Carmen Ramos



● Maribel de Dios



● Rosa Obesso



● Luisa Ruiz



● Javier Segura



● Reyes García



● Marta Sastre



● Pilar Crespo



Photovoice Food Environment: Methods



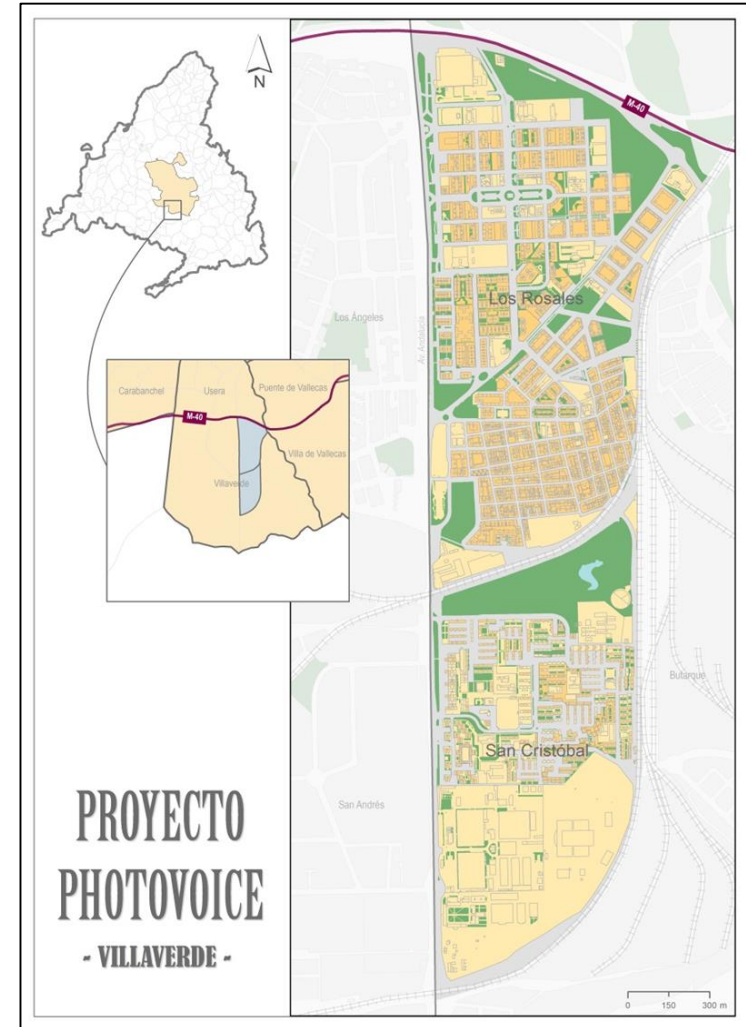
Setting Two neighborhoods of a low-income area in Madrid (Spain).

Participants

- 24 residents (31-72 years old).
- A group of women and another one of men per neighborhood.

Procedure

- A total of 163 pictures of their local food environment
- Groups met at least for 5 sessions two months

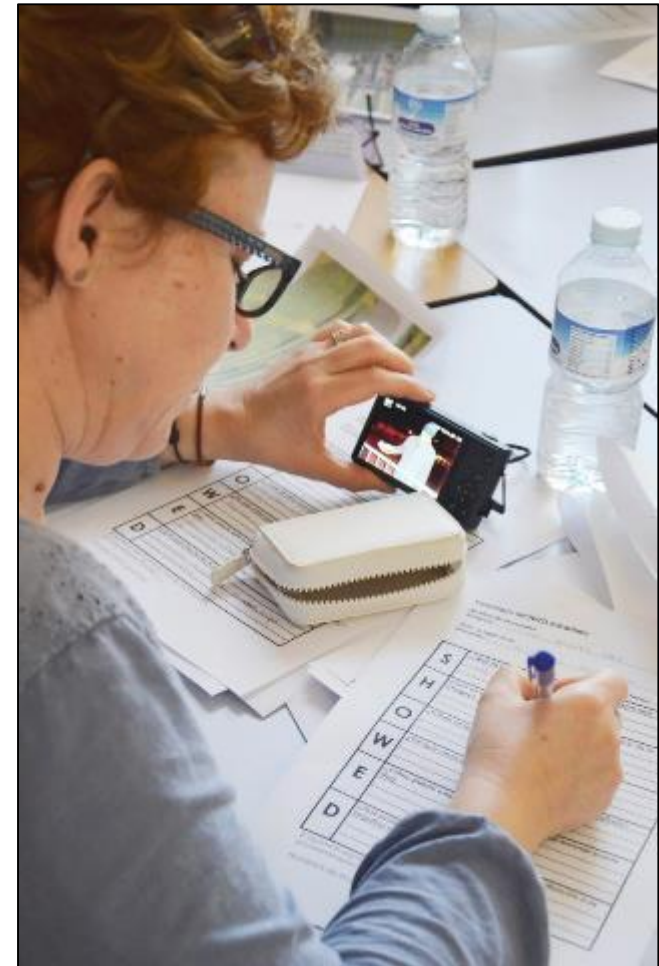




Photovoice Food Environment: Participants' Analysis



- One best photograph
- Photographs discussed critically individually and in groups
- 31 emerging themes for the 4 groups





Photovoice Food Environment: Results



31 themes finally merged into 5 main themes:

1. Eating in moderation
2. Cultural diversity
3. Food retailers
4. Socialization
5. Economic crisis and poverty





Theme 1: Eating in moderation



Photo caption: **"Bakery"**

"The tray came just from the oven, with an appealing look and a smell...so tasty!"

"It has a lot of fats because the greater part of this product is produced with saturated fats"

"Just the once will not hurt"

(Female, 36)



Photo caption: **"Saturated fats"**

"We are looking at very appetizing products"

"Awesome for the palate. If abusing, your cholesterol goes through the roof"

"Moderation, lots of moderation"

(Male, 69)



Theme 2: Cultural diversity



Photo caption: **"Spanish omelette"**

"We see a very tempting spanish omelette"

"The omelette has a very healthy nutritious value, with the eggs and the potatoes"

(Male, 70)



Photo caption: **"Melon and cassava"**

"Street markets' stalls reflect the cultural diversity of the neighborhoods"

"Try to encourage people to try and prepare new foods, to diversify their diets"

(Female, 40)



Theme 3: Food retailers



Photo caption: **“San Cristobal street market”**

“A great variety of fruits and vegetables that come on!, so colourful I can't stop having my eyes on it.”

“The foods they sell are healthy”

“This teaches us that we can eat healthy and varied in a low-cost way”

(Female, 46)



Photo caption: **“In the fish shop”**

“The fish merchant is serving his forever customers, the ones doing their grocery shopping always there”

“They keep their customers forever because they have high-quality fresh fish”

“Vegetables, fish, meat and fruits are very healthy”

(Female, 46)



Theme 4: Socialization



Photo caption: **"Friends' terrace"**

"I think that is pretty healthy to have some beers out on the terrace with Friends"

"It's a everyday situation, a way to gather with friends"

"We have to be willing to take time out whenever we can to enjoy with the ones you love, with a drink, etc"

(Female, 51)



Photo caption: **"Sewing"**

"They're eating while gathering with friends, they sew and have a chat"

"Company and friendship improves their self-esteem"

"Promote these workshops for widows feeling lonely. Encourage more women to share these activities"

(Female, 59)



Theme 5: Economic crisis and poverty



Photo caption: **“Caritas´food bank”**

“Food products they give away for those in need in San Cristobal”

“There is people without own resources, who need to eat”

“People with foods should donate to those in need. Don´t throw them into trash”

(Male, 42)



Photo caption: **“Ash Wednesday”**

“Neighborhood association is sharing sardines with the neighborhood”

“You see much (poverty) and this is a shame”

“More things like this should be done, for avoiding this happening, nobody should go hungry”

(Female, 46)



Research translation process



Participants and co-facilitators met twice to translate these findings into policy recommendations aiming to improve the local food environment.





11 food environment recommendations selected and ranked

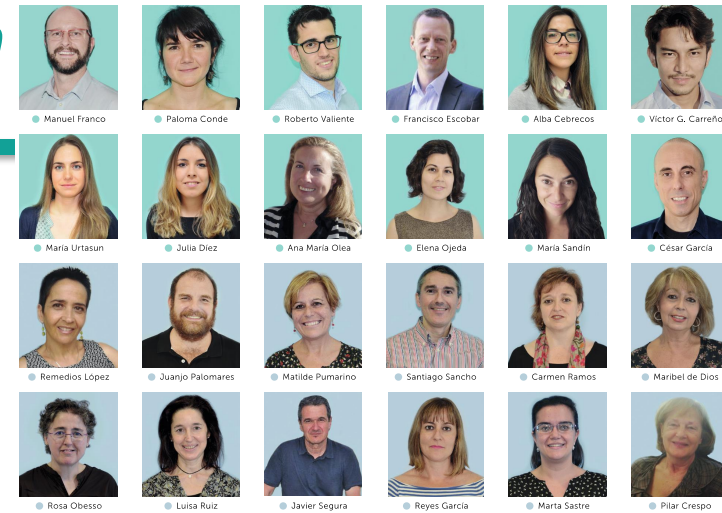
Determinants of diet	Recommendations (ranking)
Macro level determinants of diet	<ul style="list-style-type: none">- Offering local leisure time activities to avoid unhealthier options as snacking and drinking alcohol and sodas (1)- Improving nutrition labels (7)- Promoting healthy social networks for older people (10)- Giving street vendors legal status (11)
Organizational food environment	<ul style="list-style-type: none">- Improving food banks management (2)- Reducing food waste (6)- Healthier alternatives to workplace vending machines (8)- Importance of food education in schools (9)
Community food environment and Consumer food environment	<ul style="list-style-type: none">- Reactivating traditional market and small retailers (3)- Improving food hygiene conditions (4)- Promoting the availability of organic and foods for people with special needs (e.g. diabetes and celiac disease) (5)

Paper in progress, Maria Urtasun



Reunión de Ciencia Ciudadana

Alimentación



Concejal de distrito Villaverde

Concejal de salud de Madrid

Madrid Salud



Disseminating results and reaching policy makers



- Residents participated in dissemination strategies: Photobook, Videos, Scientific and cultural meetings, Media collaboration
- <https://hhhproject.eu/photovoice/photovoice-publications/>
- Participants co-analyze their data and coauthor papers
- Participants presented policy makers their results twice

Citizen Science Meeting

Photography exhibit





CENTROCENTRO Cibeles
Madrid, April 13th – September 11th



Photovoice Villaverde

Photovoice Villaverde

Un estudio participativo sobre la alimentación a través de la fotografía
A participatory study on food through photography





Mejorar la ciudad, Mejorar nuestra salud





HEART HEALTHY HOODS



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