Our vision is that all low-income San Francisco residents, in all neighborhoods, will have access to fruits and vegetables at the market where they regularly shop.
What We’ll Cover Today

• Problems Addressed by EatSF
• Conceptual Framework
• Program Design
• Rapid Feedback Evaluation (program)
• Outcomes: participants, distribution sites, vendors
• Enrollment: households & voucher Redemption
• EatSF Future Forward
• Q & A
Healthy Food

*Diets low in fresh F&V are associated with obesity, diabetes, cancer and cardiovascular diseases*
Nutrition Critical for Healthy Development & Aging

- Children
  - Decreased intellectual & emotional development
  - Poorer physical health: more hospitalizations (decreased employment capacity for caregivers)

- Pregnant mothers
  - Smaller, sicker babies

- Adults & Seniors
  - Obesity
  - Diabetes & poor diabetes control
  - Mental illness and exacerbations of serious mental illness
  - Decreased capacity to maintain independence with aging

- People living with HIV & AIDS
  - Increased HIV-related wasting
  - Inability to control virus levels, even when on effective anti-retroviral therapy
Problems

Lack of Resources

- 1/3 of low-income SF residents report that they cannot afford nutritious food (CHIS, 2014)
  - 28% of SF residents are low-income (<200% FPL, FSTF Report)
  - High cost of living in SF

- Many ineligible for CalFresh
  - 45K SSI recipients in SF: low-income seniors, disabled adults (SSA, 2014)
  - Undocumented residents
  - Gross income > 200% FPL
Problems

Lack of Access to F&V

• Too few retail outlets sell *healthy and affordable* foods
  – Food “deserts” in high poverty neighborhoods (such as TL, SOMA, and Bayview) make access to nutritious foods increasingly difficult
  (Modified Retail Food Environment Index, 2011 – SPUR)
Neighborhoods with High Poverty and Lack of Healthy Food Retail Options

Source: SPUR, 2015
Problems

Low F&V Consumption
Among Low-income Households

• Only 25% of young children in SF reported eating 5+ servings of fruits and vegetables daily compared to 49% statewide. (CHIS, 2009)

• Adults living in food-insecure households consume fewer weekly servings of fruits, vegetables, and micronutrients (Seligman, 2007)

• 20% of low-income US households report no weekly purchases of fresh F&V
Problems
Health Disparities

• Hospitalization rates due to **Hypertension, Heart failure and Diabetes** occur significantly more frequently in the **Bayview, TL and SOMA** than in other neighborhoods (see map).

• The Tenderloin, South of Market and Bayview-Hunters Point neighborhoods far exceed the city/countywide rate and goal for preventable emergency room visits.
Heart Failure
Hospitalization Rate

Hypertension
Hospitalization Rate

Age Adjusted 18+, hospitalizations per 10,000 (SFHIP website; Source COSHP 2011-13)
Diabetes Hospitalization Rate*, per 10,000, 2007-2009

Age-adjusted rate per 10,000
- No Data Available
- 3.8 - 4.9
- 6.2 - 10.9
- 12.8 - 18.9
- 22.7 - 26.9
- 40.9 - 68.5

*Age adjusted, adults only

Source: Health Matters in San Francisco
www.healthmattersinsf.org

City and County of San Francisco
Department of Public Health
Environmental Health Section
Available at www.thehdmt.org

UCSF Center for Vulnerable Populations
Problems

Race/Ethnic Disparities

• SF African Americans are far more likely to suffer from diabetes (CHIS 2011-2012)
  – African American: 15.8%
  – Asian: 7.2%
  – Latino: 5.2%
  – White: 1.2%

• SF African Americans and Latinos are more likely to be overweight
  – 73% of African-Americans and 74% of Latinos in SF are overweight/obese. (CHIS, 2009)
**Age-Adjusted Hospitalization Rate due to Diabetes by Race/Ethnicity**

- American Indian or Alaska Native*: 44.9
- Asian or Pacific Islander: 6.0
- Black or African American: 54.8
- Hispanic, any race: 17.8
- White, non-Hispanic: 8.7

**Age-Adjusted Hospitalization Rate due to Hypertension by Race/Ethnicity**

- Asian or Pacific Islander: 1.7
- Black or African American: 14.3
- Hispanic, any race: 3.6
- White, non-Hispanic: 1.5
- Overall: 2.7

SFHIP Health Indicator – Source data: COSHPD, 2011-13
Many Low-Income SF Residents have a Diet-Sensitive Chronic Disease < 200% FPL

19,000 (min) LI adults with obesity (CHIS 2014)

21,000 (min) LI adults with diabetes (CHIS 2014)

8,000 (min) LI children with obesity (UCLA, CHP)

Prevalence 2.7 times greater than higher income children (US Data; Singh & Kogan, 2010)

39,000 (min) LI adults with hypertension (CHIS 2014)

In SF, hypertension diagnosis is 1.8 times higher for low-income adults (CHIS 2014)

In SF, diabetes diagnoses are 3 times higher for low-income adults (CHIS 2014)
Conceptual Framework

Food Security
&
Diet-Related Chronic Disease
Food Insecurity & Chronic Disease

Food Insecurity

Household Income
Down

Spending Tradeoffs
Up

Health Care Expenditures
Up

Employability
Down

Coping Strategies:

Dietary Quality
Down

Eating Behaviors
Down

Bandwidth

Chronic Disease

Increased Complications

Adapted from Seligman & Schillinger
Coping Strategies to *Avoid* Hunger

- Eating low-cost foods
  - Fewer F&V
  - More fats/carbs
- Eating highly filling foods
- Small variety of foods
- Avoiding food waste
- Binging when food is available

- Higher risk of obesity, diabetes, & other chronic, diet-sensitive diseases
- Once you are chronically ill, poorer ability to manage it your illness
A Conceptual Framework: Cycle of Food Insecurity & Chronic Disease

- **Food Insecurity**
- **Household Income**
- **Spending Tradeoffs**
- **Health Care Expenditures**
- **Employability**

**Stress**

**Coping Strategies:**
- Dietary Quality
- Eating Behaviors
- Bandwidth

**Chronic Disease**

**Health Care Intervention**
A Conceptual Framework: Cycle of Food Insecurity & Chronic Disease

- **Food Insecurity**
- **Upstream Community Intervention**
- **Coping Strategies:** Dietary Quality, Eating Behaviors, Bandwidth
- **Chronic Disease**
- **Stress**
- **Household Income** (↓)
- **Spending Tradeoffs** (↑)
- **Health Care Expenditures** (↑)
- **Employability** (↓)
# Food Insecurity and Health Care Costs

<table>
<thead>
<tr>
<th>Variable</th>
<th>Odds of health care expenditure*</th>
<th>Total health care costs per person†</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unadjusted OR (95% CI)</td>
<td>Adjusted‡ OR (95% CI)</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>--------------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>Food insecurity status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food secure</td>
<td>1.00 (ref)</td>
<td>1.00 (ref)</td>
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<tr>
<td>Marginally food insecure</td>
<td>1.03 (0.90–1.17)</td>
<td>1.13 (0.99–1.29)</td>
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<tr>
<td>Moderately food insecure</td>
<td>1.21 (1.08–1.36)</td>
<td>1.33 (1.18–1.50)</td>
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<tr>
<td>Severely food insecure</td>
<td>1.54 (1.30–1.81)</td>
<td>1.71 (1.44–2.04)</td>
</tr>
</tbody>
</table>

Source: Tarasuk, CMAJ, 2015.
Hospital Admissions Attributable to Low Blood Sugar

Admissions Attributable To Low Blood Sugar Among Patients Ages 19 And Older To Accredited California Hospitals On Each Day Of The Month, By Income Level, 2000–08.

27% increase in low blood sugar admissions during 4th week of month (compared to 1st week of month) for low-income group only

Source: Seligman H K et al. Health Aff 2014;33:116-123
Cost of A Health Care Visit for Low Blood Sugar vs. Food

- Inpatient Admission: $17,564
- Emergency Visit: $1,387
- Outpatient Visit: $394
- Monthly Food Cost (Family of 4): $657*

American Journal of Managed Care, 2011.

*Thrifty Food Plan
Theory of Change

- EatSF
- More Intake of F&V
- Better Health & Wellbeing
- Reduced Health Care Costs

UCSF Center for Vulnerable Populations
EatSF

Fruit and vegetable voucher program for low-income SF residents with diet-sensitive chronic diseases and families with children <12 yrs. old
EatSF Vision

Our vision is that all low-income San Francisco residents, in all neighborhoods, will have access to fruits and vegetables at the market where they regularly shop.
EatSF: Program Design

• Incentivizing healthy food purchases

• $20 - $40 per month

• Vouchers redeemed at corner stores, farmers market, and large-scale grocery stores for fresh or frozen fruits and vegetables
EatSF: Program Design

• Participants enrolled through community-based organizations (distribution sites)

• Distribution sites:
  – Community health clinics, SROs, senior centers, health and wellness programs, social service agencies
(1) Participants get vouchers for the purchase of fruits and vegetables.

(2) Participants bring the vouchers to a participating store or farmer’s market and buy fruit and vegetables.

(3) The store fills out the voucher (amount spent up to the maximum value & items purchased) and sends to EatSF for reimbursement.

(4) EatSF sends the store the face value of the voucher PLUS an extra $0.25 convenience fee.
Multiple Benefit Program

Individual:
- Consume more F&V
- Improve health
- Less food insecure
- Socio-emotional benefits

Community:
- Local economic support
- Support CBO/Clinic wellness efforts
- Better access to fresh F&V in local stores (more stocking of F&V)

SF:
- Improved health outcomes
- Reduce health disparities
- Reduce health costs
- Reduced food insecurity

UCSF Center for Vulnerable Populations
EatSF Video

A short clip on EatSF (less than 2 minutes) that explains how the program works, though the experience of a program participant (Marilyn):

https://youtu.be/ubj74L79oK8
EatSF: A Complementary Approach

• **Flexibility**: integrates into each site’s unique ‘work flow’

• **Supplementary**: ‘add-on’ to existing health and wellness/nutrition components

• **Incentive**: engages clients in programming

• **Neighborhood approach**: develops sense of community

UCSF Center for Vulnerable Populations
EatSF: A Customer-Centered Approach

- **Easy**: enrollment process allows for quick adoption and engagement
- **Culturally sensitive**: materials translated into Spanish, Chinese, Vietnamese
- **Branding**: conveys health, wellness
EatSF: Focus Areas

- Neighborhoods:
  Tenderloin, South of Market, Bayview
EatSF: Focus Areas

• Eligible participants:
  o Low-income adults with a diet-sensitive chronic disease (diabetes, hypertension, chronic heart failure, obesity, HIV) AND families with children 12 yrs. old or younger in household

• Targeted populations (food insecure):
  o SSI, SRO residents, seniors, families
EatSF: Focus Areas (Tenderloin & SOMA)

**Current Sites**
- AAIMS Project
- API Wellness Center
- Conard House (2 Buildings)
- Curry Senior Center (housing, clinic programs)
- Episcopal Community Services (5 Buildings)
- Glide
- Lutheran Social Services
- SFGH TB Clinic
- St. Anthony’s (2 programs)
- Tom Waddell Urban Health Clinic

**Pending/waitlisted sites**
- Lyon-Martin Clinic
- SFGH Diabetes Clinic
- DISH (Designing Innovations in Supportive Housing)
- Salvation Army
- Castro Mission Health Center
- Charlotte Maxwell Clinic
- NEMS (Northeast Medical Services)
- BAART – FACET program
- Mercy Housing
- YMCA (diabetes program)

UCSF Center for Vulnerable Populations
EatSF: Focus Areas (Bayview)

Sites:

- Southeast Health Center
- YMCA
- Bayview Hunters Point Multipurpose Senior Services, Inc. (2 sites)
- Hope House (2 Buildings)
Distribution & Vendor Sites - Bayview

Distribution Sites

Vendors
National Interest in EatSF Model

• Unique in Vendor Coverage
• Presenting at Wholesome Wave
• AARP Foundation Interest
Rapid Feedback Evaluation

To what degree is EatSF performing as intended in the field?
Methods

• Pre/post survey (3-month rapid feedback) of same participants over time
• Distribution site survey
• Client interviews
• Vendor survey & pre/post site visits
Rapid Feedback: Program Satisfaction

Program Satisfaction:

• 89%: high or very high satisfaction with EatSF (clients)
• 63%: dollar amount just right (clients)
• 100%: report EatSF as a helpful resource (distribution sites)

Ease of Use:

• 95%: vouchers easy to get (clients)
• 98%: questions easily answered (clients)
• 95%: vouchers easy to redeem (clients)
• 82%: report enrollment process, voucher distribution, and survey administration is very easy or easy (distribution sites)
Rapid Feedback: Lessons Learned & Improvements

- Added additional stores
- Expanded to more neighborhoods
- Expanded eligibility criteria
- Streamlined paperwork (voucher log)
Evaluation: Client Interviews

Common themes:

– Stability
– Convenience and Easy to Use
– Increased fruit and vegetable intake
– Choice
Stability

“For what the program offers, and what the program’s trying to achieve, I think they do a remarkable job considering that this is the TL and the TL can be insane seven days a week, 24 hours a day. And this is probably one of those foundation things you know, that, you know you’re gonna get your vouchers, you know you’re gonna go to the reunion meeting, and that adds some stability to your life, because there’s not a lot of stability in this community.”
Convenient and Easy to Use

“The availability of the vouchers, the places where we’re allowed to go, you know, it’s not that far, it’s like one around the corner, up there on Leavenworth, that I go to, I go there for my fruits and vegetables. The availability and convenience…where the markets are located.”

“And it’s so convenient ‘cause it’s right here where I live, you know, to get ‘em, you know. I don’t have to walk nowhere to get ‘em…to get the vouchers…so it’s real convenient, you know.”
Increased Fruit and Vegetable Intake

“Eating the right food has become more important to me, and I’m seeing its health benefits”

“Yeah, before I started the vouchers, I’ve never eaten avocados. You know, I buy green onions with them also. I’ve never bought green onions, you know. I mean, I like green onions, but I never bought ‘em till I got these vouchers, you know.”
Evaluation: TL Vendor Interviews

• 100% of store managers report extreme satisfaction with EatSF (top of 5pt-likert scale)
• All stores are experiencing additional monthly profits

• Due to EatSF, Vendors are experiencing:
  – Differences in the foods customers buy
  – More frequent ordering/re-stocking of produce
  – Throwing away less of their fresh produce

“I like the friendliness at the markets, they always treat us right.”
- EatSF Participant
Participant Outcomes: Promising Results

1. EatSF is reaching critically **underserved** Populations
2. EatSF is addressing SF **health disparities**
3. EatSF participants are **eating more F&V, feel healthier**, and many are less food insecure
EatSF Participants: *Underserved*

- Food Insecure
- Chronic disease
- Critically low-income
- Not receiving CalFresh or WIC
- Not using food pantries
- Vulnerable Subpopulations
- Live in underserved communities
EatSF Participants: Underserved

**EatSF participants are food insecure:**
- 78% very low or low food security status
- 73% report food budget lasting 3 wks/month or less
  - 60% of single adults are VERY LOW food security status

**EatSF participants are critically poor:**
- 78% report a monthly income of $1000 or less

**EatSF is reaching the most underserved:**
- 90% do not receive CalFresh
- 95% do not receive WIC
- 65% do not receive food from a food pantry
- 78% do not receive food from a meal program or soup kitchen
EatSF is reaching the *chronically ill*:

- 66% overweight or obese
- 61% hypertension
- 37% diabetes
- 11% congestive heart failure
- HIV, TB, Hep C, cancer
EatSF is reaching **vulnerable** populations:
- 42% live in an SRO
- 37% are seniors (60+)
- 38% are families
- 20% report full or part-time work (working poor)
- 47% are receiving SSI

EatSF is reaching **diverse** populations:
- 48% Limited English Proficiency (LEP)
- 29% Hispanic/Latino
- 24% African-American
- 21% Asian
EatSF participants are....

Increasing their *Fruit and Vegetable Intake*:

- Eating more F&V
  - 90% reported EatSF helped them to eat more F/Vs *a lot*
    - 9% a little and 1% not at all
- Improved Dietary Intake (from screener)
  - 67% reported an increased **daily intake in (F/Vs)**
    - 45% increased daily F/V intake by 1-2 daily servings
    - 17% by 2 or more daily servings
    - Participants reported statistically significant increases in fruit, salad and vegetable consumption

Extending their *Food Budgets*:

- 29% report food budget lasted longer by 1 week or more

“It has given me healthy food and I don’t miss meals, it stretches my food budget, which is starting to last all month”
EatSF participants are….

**Feeling healthier:**
- 33% reported positive change in health status from Poor or Fair to Good or Very Good

**Reducing Barriers to Eating a Healthy Diet:**
- 52% reported increased ability to eat a healthy diet
- Of those, 36% changed from “it was hard to eat a healthy diet” to, it was “not hard”
Other Key Performance Indicators
EatSF Enrollment

Cumulative Enrollments

- Total Cumulative Enrollments
- BVHP Cumulative Enrollments
- SOMA Cumulative Enrollments
- TL Cumulative Enrollments

*Dashed lines are projected enrollments
Key Performance Indicators
6 months

- **Voucher Redemption Rate**
  
  Target = 85%; Actual = 77%

- **Participant Retention**
  
  Target = 85%; Actual = 85%

- **Vendor Retention**
  
  Target = 100%; Actual = 100%
Key Performance Indicators: Fraud

• Vendor Fraud
  No reports (one complaint)

• Secret Shopper Results
  1 incidence

• “Bad Actors”
  – Some double enrollments
  – Little/no misuse identified in voucher processing
  – No reports of participant misuse
EatSF Top Priorities

- Secure on-going funding
- Expand evaluation
- Improve distribution & tracking mechanism (vouchers)
EatSF: Future Forward

• Proof of Concept
  – Successful targeted health/food security intervention

• Opportunities
  – Approaching one year (April 2016)
Thank you!!