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Session 1
Behavior Insight x Technology

"Nudge in Public Health"

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Interested in people's behavior

purchasing behavior

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"Razor blade" business model is even more powerful with **subscription** model.

"opt-in" purchase

"opt-out" purchase

at Harvard

Entry to

"business for social impact"

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"Public health needs behavior changes,

but short of *how*"
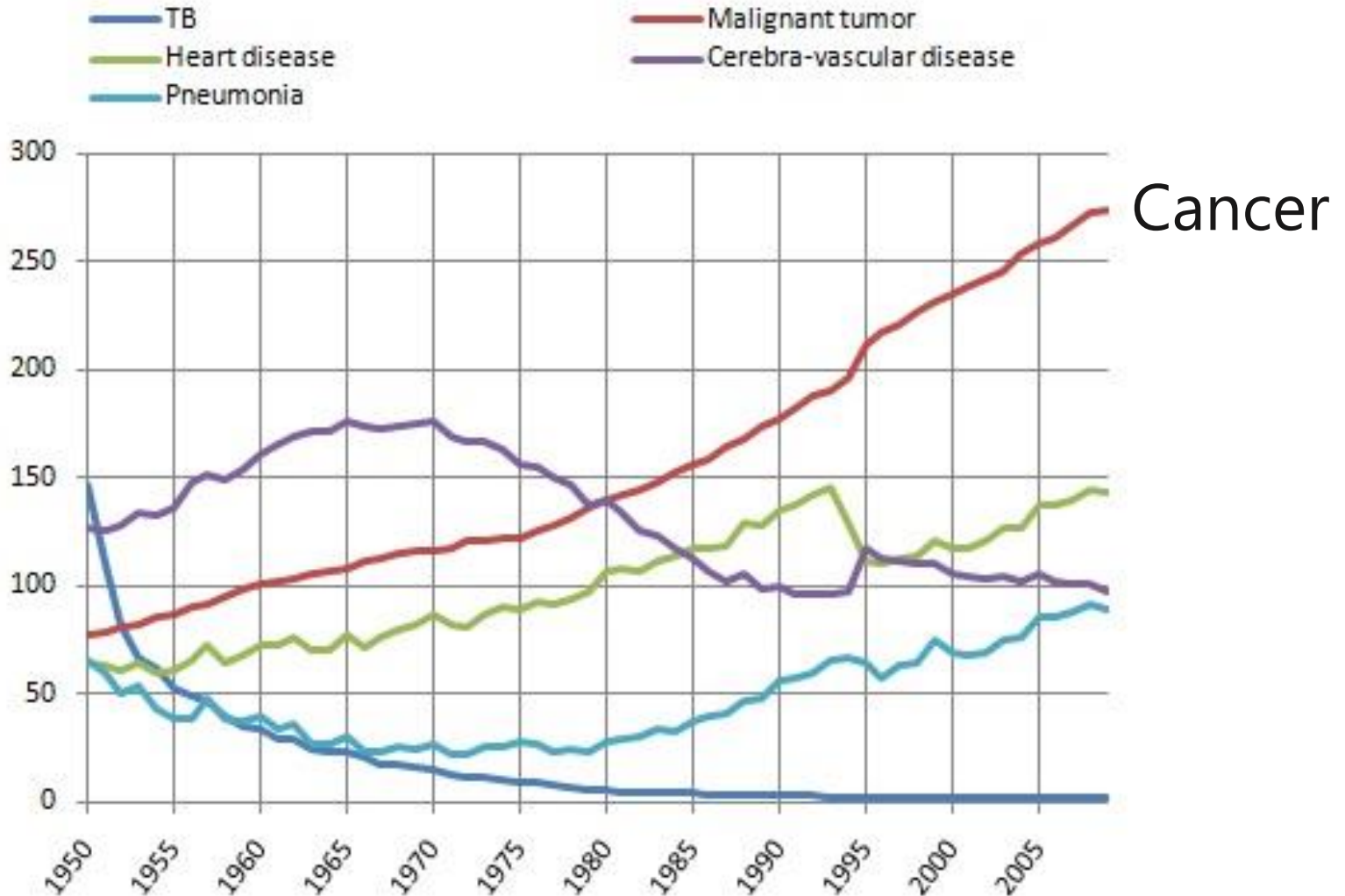
Marketing x Public Health

In Marketing,

- Message → Behavior

- Testing: A/B test

In Public Health,

- Behavior science

- Testing: RCT

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Cancer: no.1 cause of death in Japan

Legend: TB, Heart disease, Pneumonia, Malignant tumor, Cerebra-vascular disease
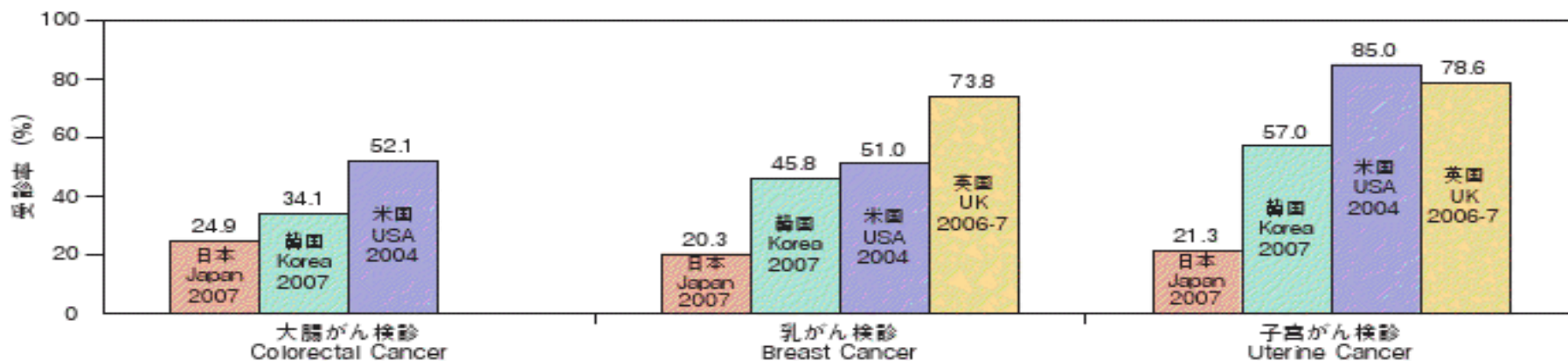
Cancer

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Situation of Cancer in Japan

・ **High** cancer mortality rate

・ **Low** cancer screening rate

Cancer Mortality Rate

Cancer Mortality Rate per 100,000	JPN	Korea	US	UK
Male	**313.5**	169.9	204.4	273.9
Female	**197.1**	96.9	183.1	240.5

Source: WHO Statistics, Mortality Database (2004)

がん検診受診率 Cancer Screening rates

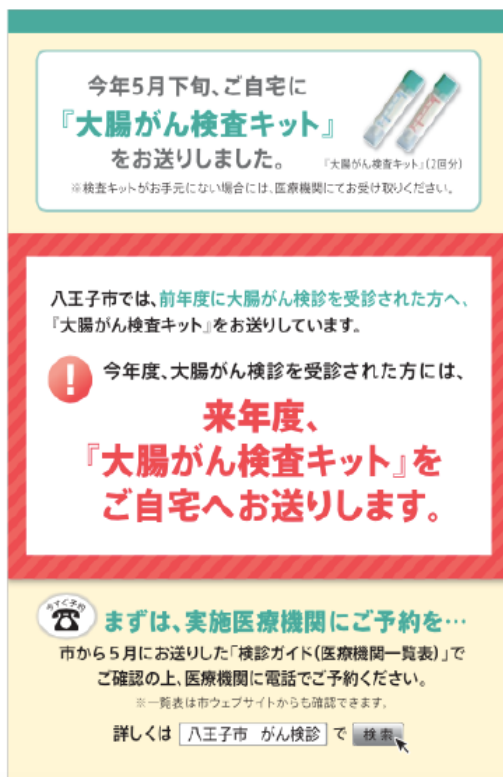|	Colorectal Cancer			Breast Cancer				Uterine Cancer			
	24.9 日本 Japan 2007	34.1 韓国 Korea 2007	52.1 米国 USA 2004	20.3 日本 Japan 2007	45.8 韓国 Korea 2007	51.0 米国 USA 2004	73.8 英国 UK 2006-7	21.3 日本 Japan 2007	57.0 韓国 Korea 2007	85.0 米国 USA 2004	78.6 英国 UK 2006-7

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Current structure

Local Government
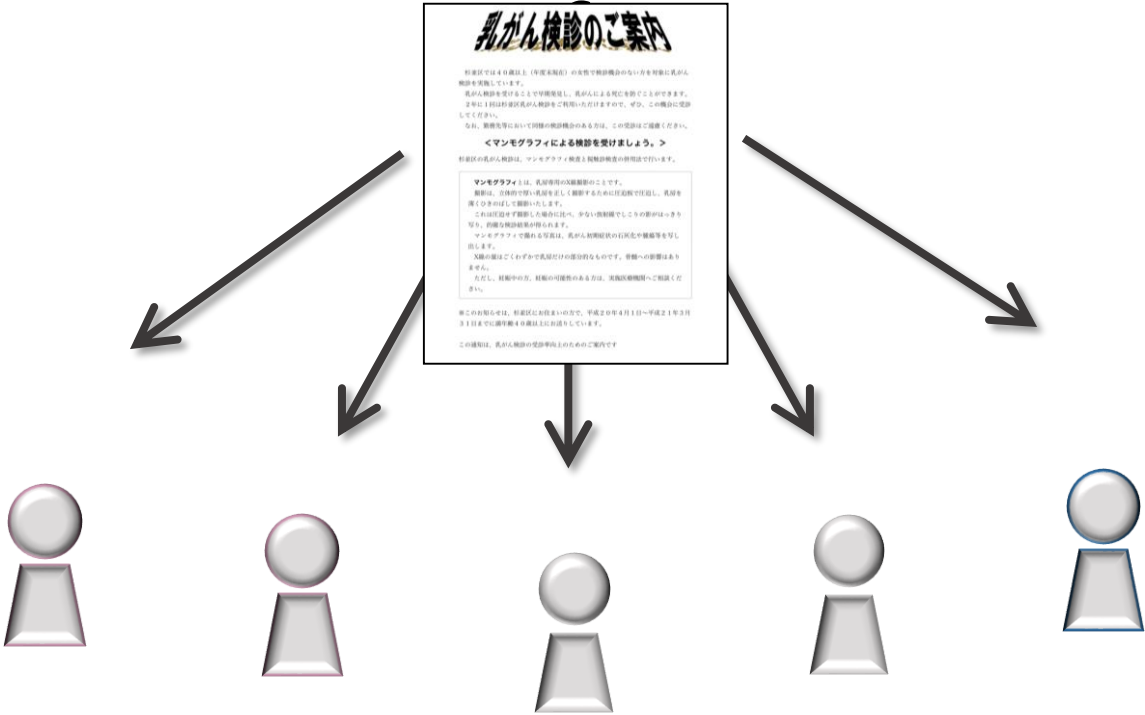
Prospect Theory for colorectal cancer screening uptake

Message A
"**If you take** a screening this year, **you will receive** a screening kit next year.
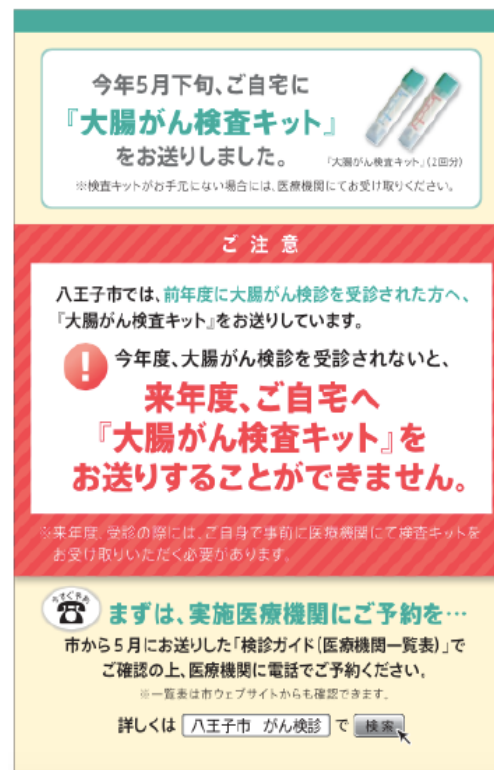
Message B
"**If you don't take** a screening this year, **you will not receive** a screening kit next year.

RCT

Message A
"Gain frame message"

1761 → uptake rate 〇〇%

3528 participants
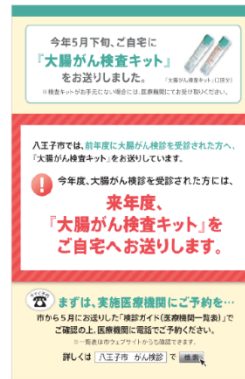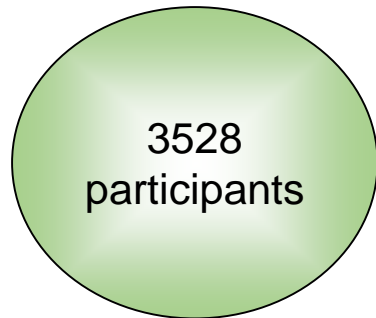
compare
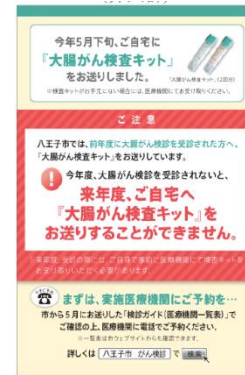
1767 → uptake rate 〇〇%

Message B
"Loss frame message"

RCT result

Message A
"Gain frame message"
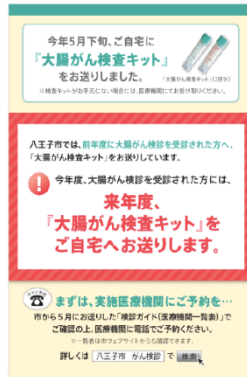
$$\frac{399名}{1761名} = \text{uptake } 22.7\%$$

P<0.000001
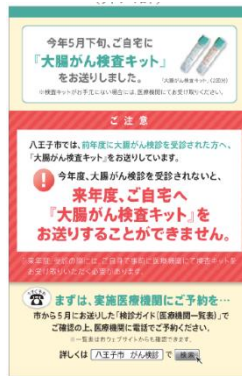
$$\frac{528名}{1767名} = \text{uptake } 29.9\%$$

Message B
"Loss frame message"

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Liver cancer screening

- 50,000+ death

- Preventable (esp. Hepatitis C can be cured almost 100%)

- Screening (blood test) is available as an optional at annual health check-up

- But, few people choose to take the liver cancer screening

- An invitation letter for liver cancer screening:

- Wordy
- $6 co-payment
- Opt-in

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Result

*

$6

21%

Wordy format
(n=535)

Simple format
(n=655)

+ for free
(n=313)

+ opt-out
(n=952)

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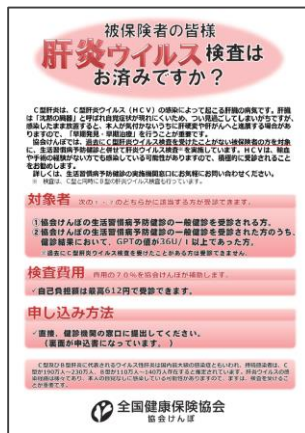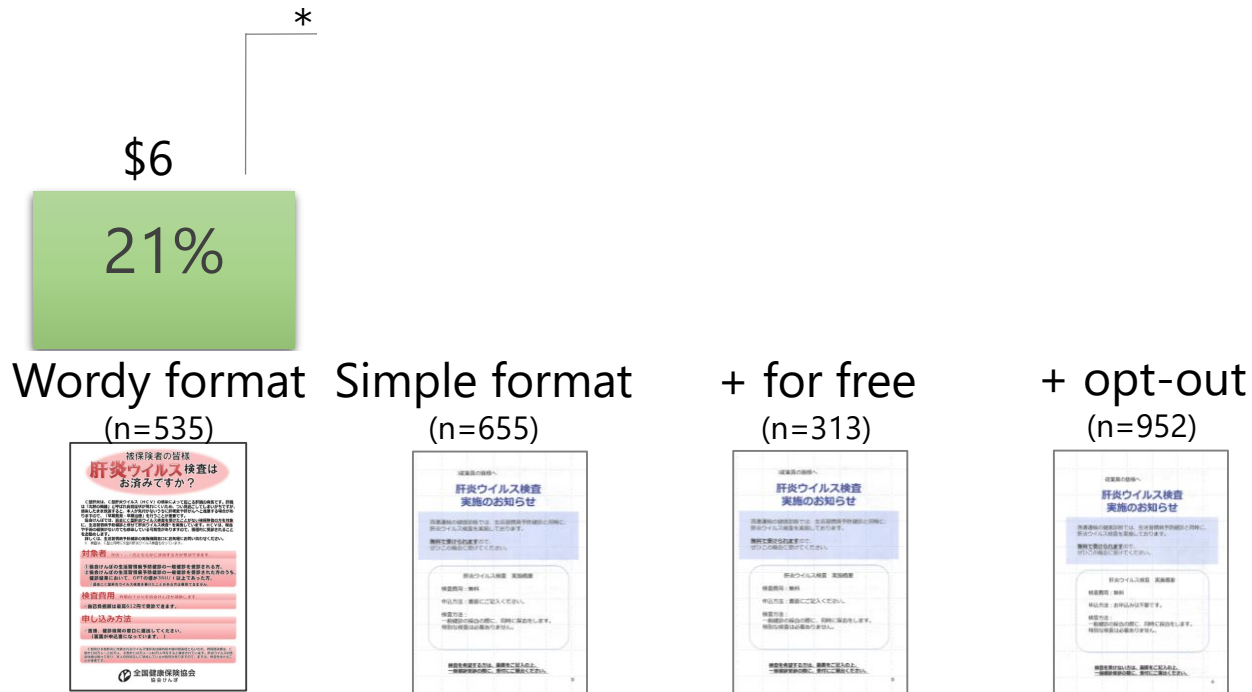
Targets have different insights

| Indifference | Contemplation | Preparation |

"I am just fine. Don't worry."

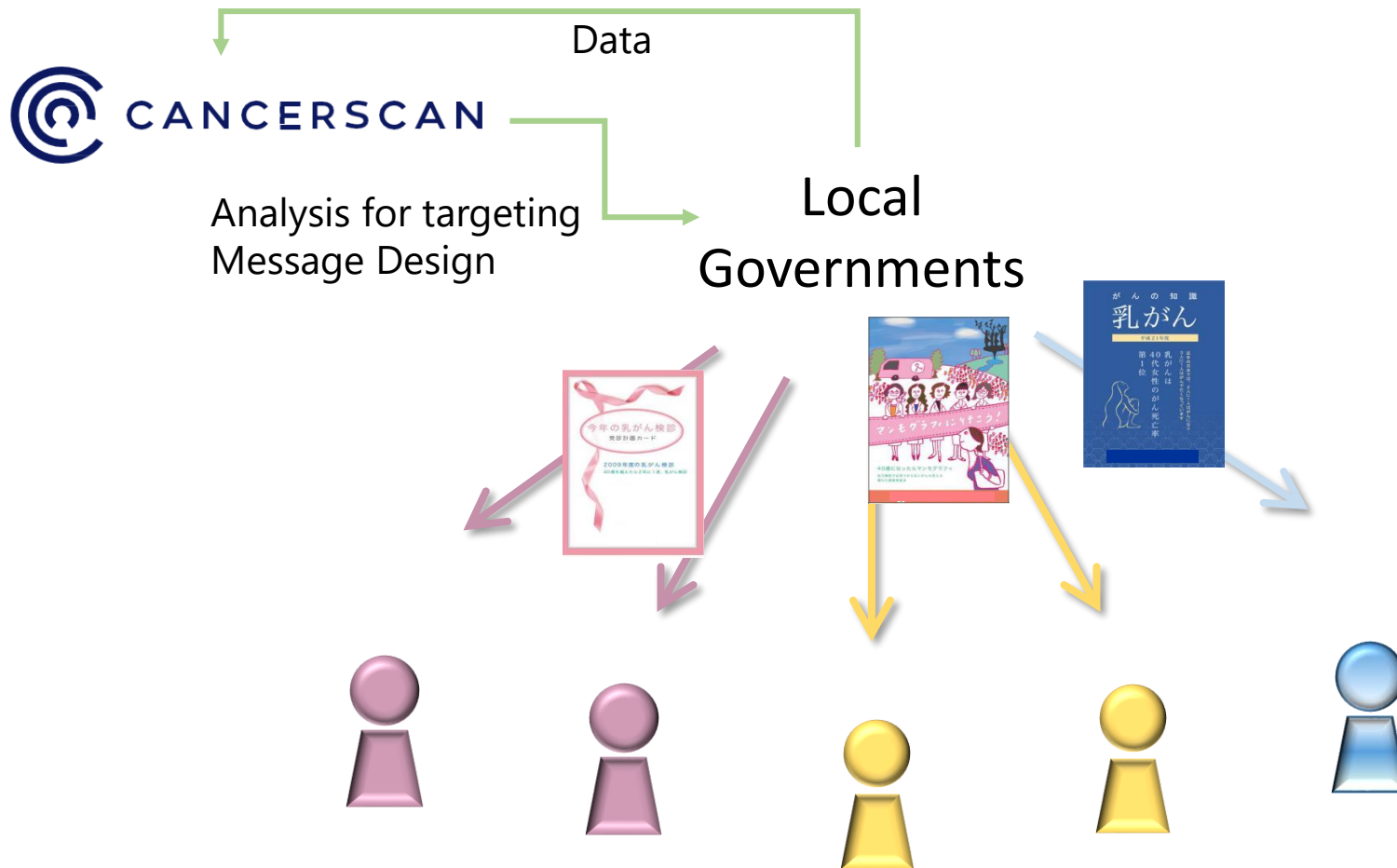"I am scared…"

"Not so sure where to start"

Behavior Insight x Data

Result: screening rate tripled

P2Y Non-taker
(Female, 51-59)
N=1,859

Intervention
N = 1,394
Screening rate:
19.9%

Control
N = 465
Screening rate:
5.8%
A: N=206 (7.3%)   B: N=129 (4.7%) C: N=130 (4.6%)

Prep/ Action
N = 628
25.5%

Contemp.
N = 376
17.3%

Indifference
N = 390
13.3%

OR = 2.3, P < .001

OR = 3.8, P < .001

OR = 5.7, P < .001

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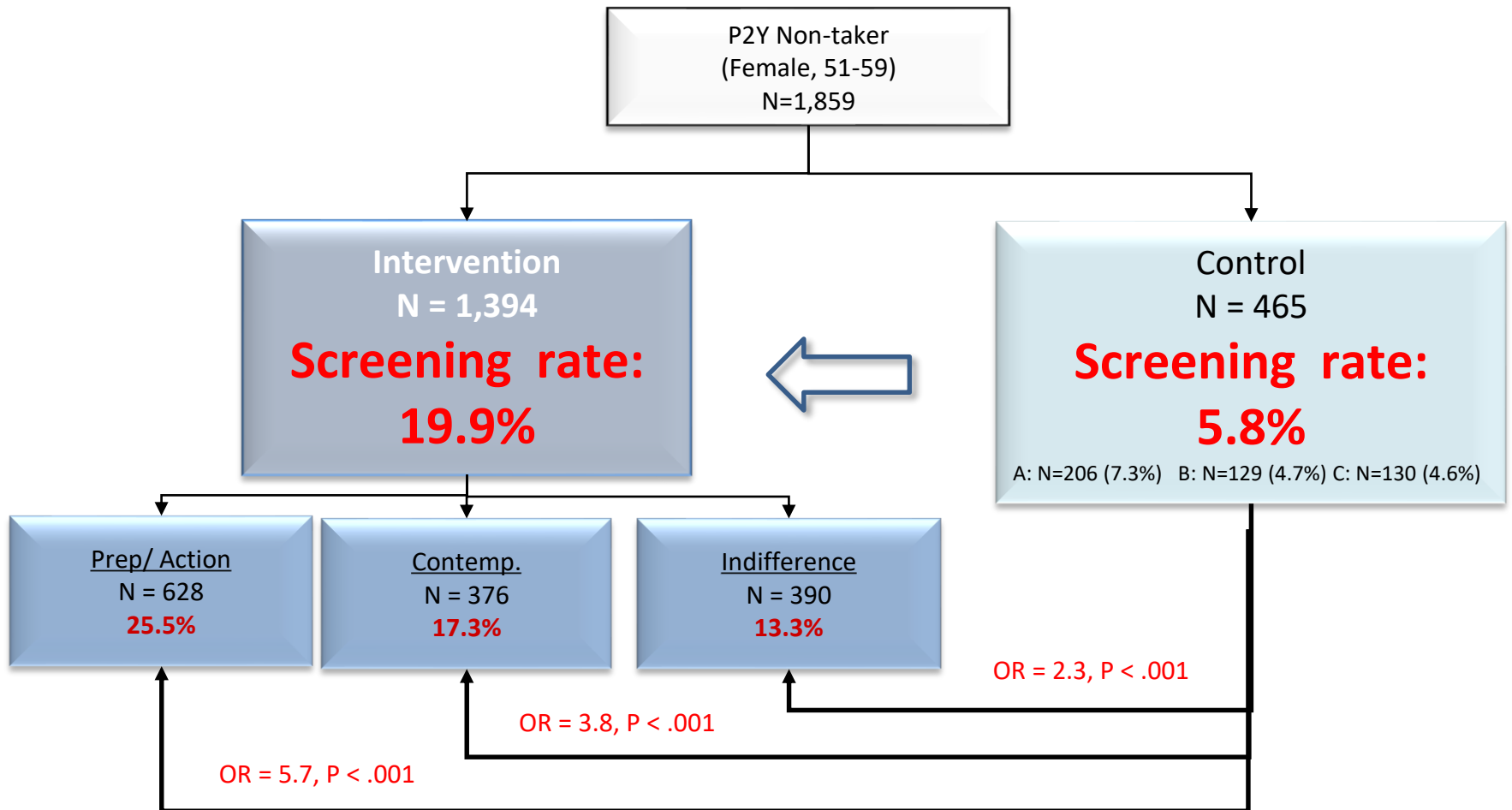
Expanding to **400+** local governments
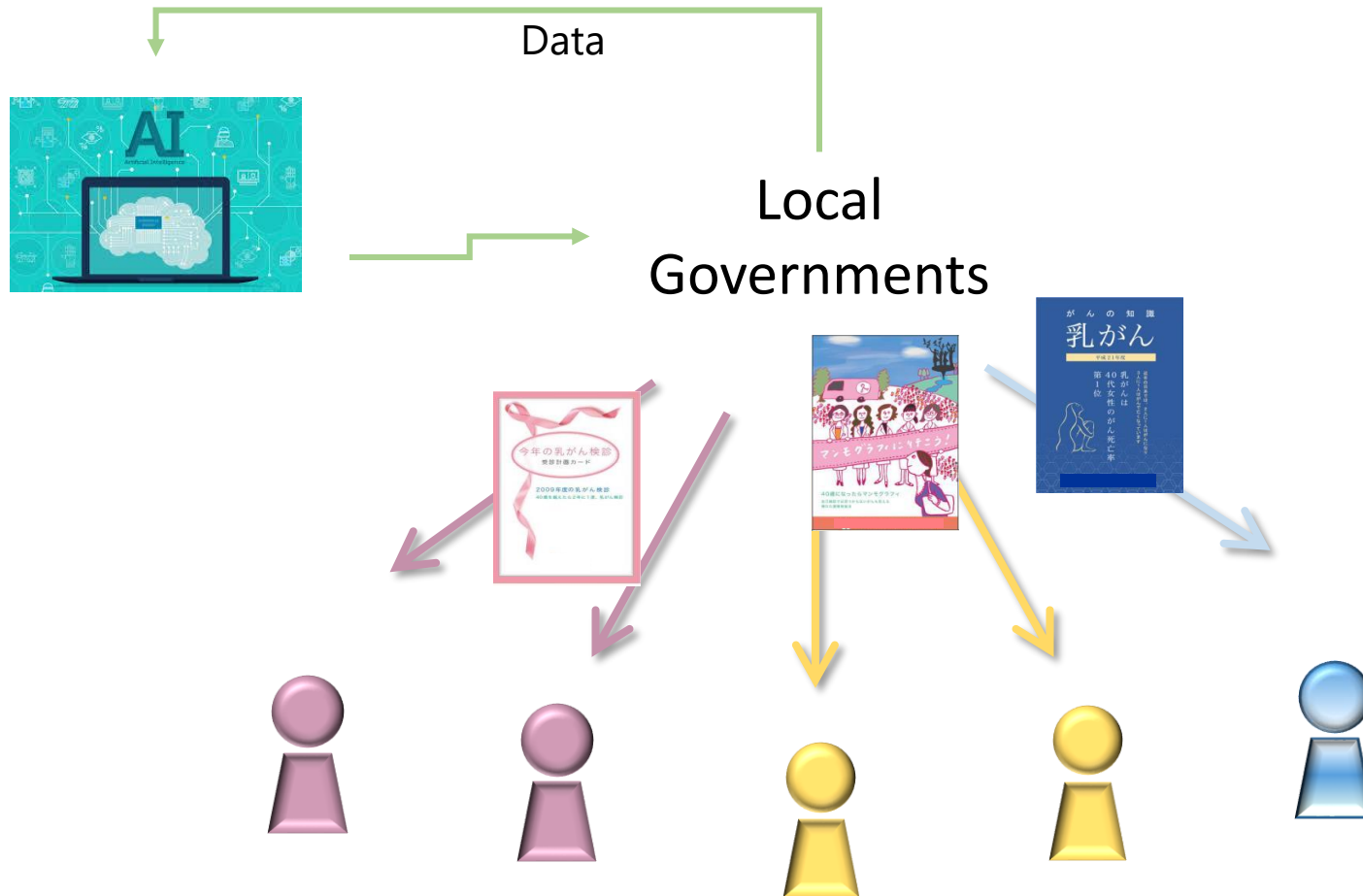
New challenge in Africa (Kenya)

Double burden

Obesity issue in Kenya

Prevalence of Women's BMI ≧ 25

48.0%

40.2%

40's

43.4%

30's

32.1%

2008   2014
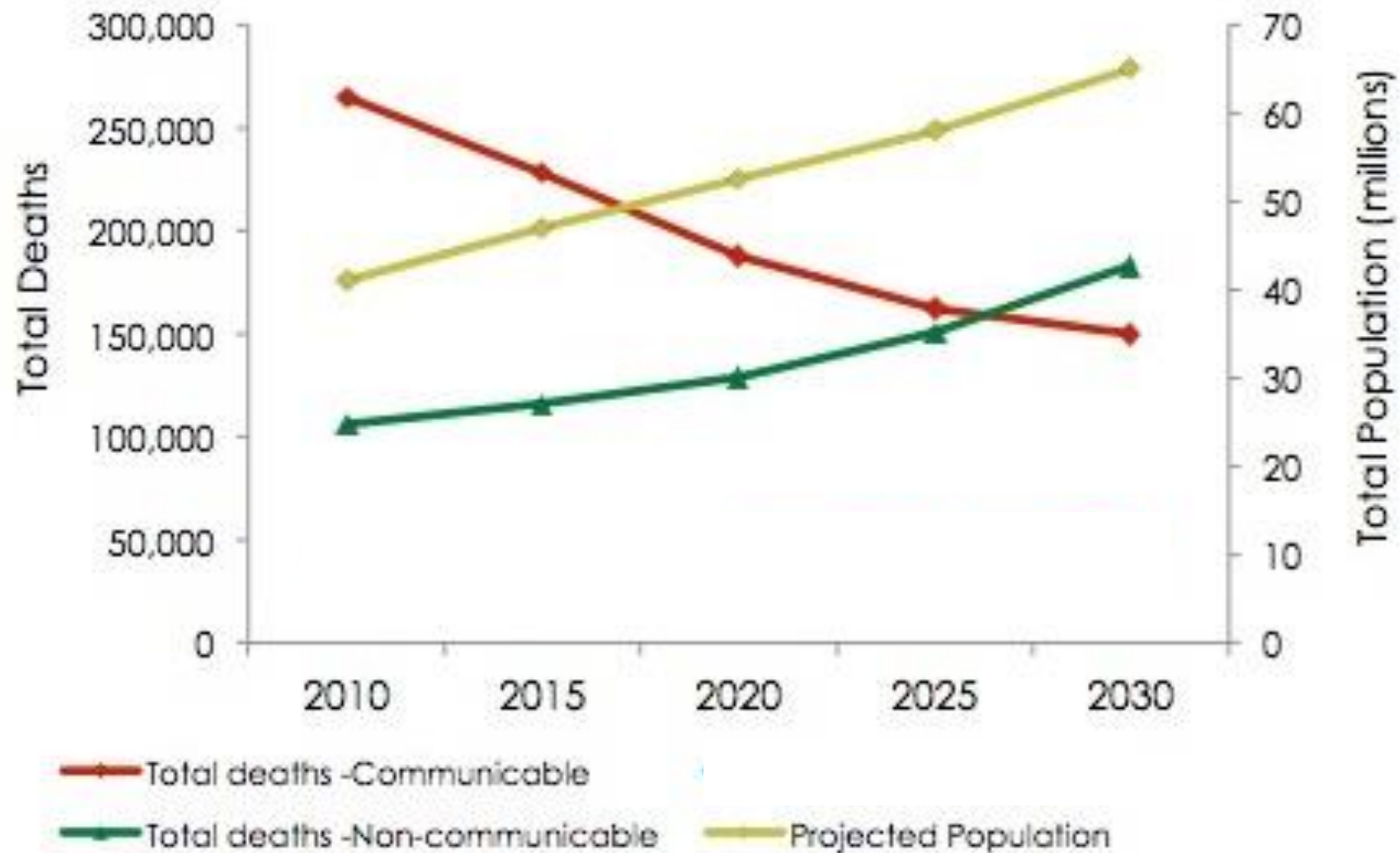
Source: Kenya Demographic and Health Survey 2008/09, 2014

Provide health check-ups

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High penetration of Smartphones

Health app, "Simway"

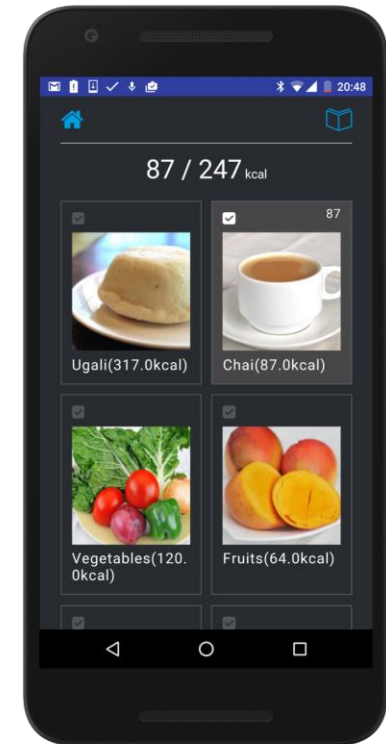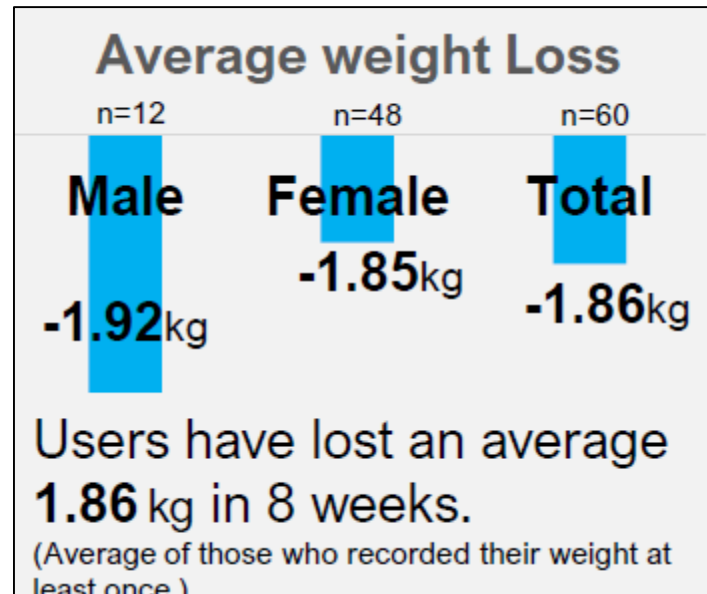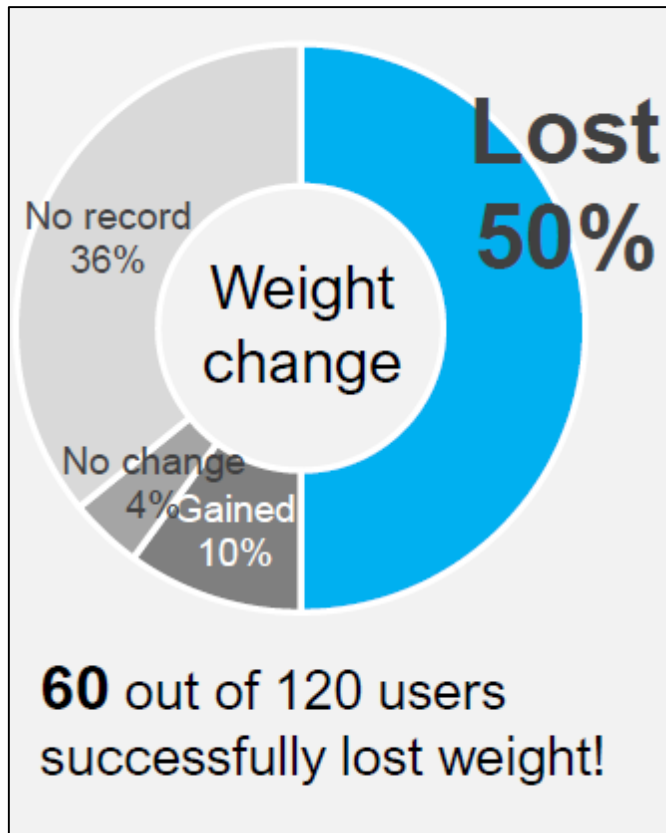## Self-monitoring functions

Selecting diet behavior

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Result: pilot test

Weight change
No record 36%
No change 4%
Gained 10%
Lost 50%

60 out of 120 users successfully lost weight!

Average weight Loss

Male (n=12)	Female (n=48)	Total (n=60)
-1.92 kg	-1.85 kg	-1.86 kg

Users have lost an average **1.86** kg in 8 weeks.
(Average of those who recorded their weight at least once.)

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From now

<center>

<u>10 years ago</u>

"Public health needs behavior changes,

but short of *how*"

⬇

"Behavior Insight x Technology"

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