Session Objectives

- Traditional Segmentation Approaches vs Patient centred segmentation
- Learning from Social marketing
- Examples of delivery of healthcare based on patient centred segmentation
- Benefits and future applications of this approach
Peter's Story

- Questions it raised
- Journey of discovery
- Application of the learning

Peter’s Story
Ed Wagner’s Chronic Care Model

Community
- Resources and Policies
- Self-Management Support

Health Systems
- Organization of Health Care
- Delivery System Design
- Decision Support
- Clinical Information Systems

Improved Outcomes

Informed, Activated Patient

Productive Interactions

Prepared, Proactive Practice Team
Four questions

- What do we need to know?
- How could we predict?
- How could we plan?
- How could we work together?
System designs that simultaneously improve three dimensions:
- Improving the health of the populations;
- Improving the patient experience of care (including quality and satisfaction); and
- Reducing the per capita cost of health care.

Design of a Triple Aim Health System Enterprise
High Risk Example

Assess and Segment the Population
- Identify high-risk/high-cost patients using a variety of methods
- Understand cost drivers within segments
- Assess patient resources and capabilities and their socially-determined risk factors

Engage and Activate the Population
- Understand patient goals and preferences
- Understand system barriers from patient perspective
- Co-create holistic approaches that impact peoples’ health

Care for the Population
- Identify patient “archetypes” and design care platforms that encompass multi-sector partners
- Move care as close to the patient as possible
- Involve non-traditional health care workforce

Establish a Cross-Community System of Care:
- Invest (develop payment mechanisms) in social determinants of health
- Build coalitions including patients and families to identify and advocate for policies that support the needs of this population
- Use stories and narrative to build will

Purpose of Segmentation
- Number of segments should be small enough
- Every one in the population should be included
- Individual segment should have similar set of needs for planning
- Segments should differ significantly enough from each other
Traditional Segmentation Approaches

- Medical conditions
- Utilization
- Predictive risk modeling
- Joanne Lynn’s Bridges to Health model

Population Segments

- “Bridges to Health Model”
  - Splits populations into 8 segments
    1. Healthy
    2. Maternal-infant health
    3. Acutely ill, likely to return to health
    4. Chronic conditions with normal daily function
    5. Serious relatively stable disability
    6. Short decline to death
    7. Repeated exacerbations, organ system failure
    8. Multi-factor frailty, with or without dementia

IDEO

- Principles - Desirability
- Feasibility
- Viability

Journey of Discovery begins....

- 90 Day cycle R & D/ Innovation method

<table>
<thead>
<tr>
<th>Scan</th>
<th>Focus</th>
<th>Summarize</th>
</tr>
</thead>
<tbody>
<tr>
<td>Review, conduct interviews &amp; select an angle</td>
<td>Visits, tests, analysis &amp; concept design</td>
<td>Validate, write up &amp; handoff to projects</td>
</tr>
</tbody>
</table>
Specific aim

- Identifying a way of segmenting a population based on attitudes and aspirations

Scanning

- Research  - Patient Activation Measure
  - Behavior Change models
Patient Activation stages

- Stage 1 – Do not believe they have a role to play
- Stage 2 - Starting to realize importance of self management
- Stage 3 - Building Confidence
- Stage 4 - Confident and a problem solver

Limitations of Patient Activation Measure as a segmentation tool

- Designed for use at individual level
- Designed to test effectiveness of intervention
- Plenty of room for improvement at highest activation level
- Activation linked to specific behavior

*Health Affairs, 32, no.2 (2013):216-222*
BJ Fogg’s Behavior Change Model

Scanning

- Interviews - Proctor and Gamble
  - Gillette
  - Gobee
  - IDEO
  - Lybba
  - James Anderson Innovation Center
Definition of Personas

- **personas** are fictional characters created to represent the different user types within a targeted demographic, attitude, and/or behavior set that might use a site, brand, or product in a similar way.

Chronic Care Collaborative - C3N Project

- Inflammatory Bowel Disease population
- Parent and child personas
- Optimized model for all segments
Justin and Anna

Justin – Diagnosed 3 years ago, 11 years old
Was scared with diagnosis, hurts a lot
Goals – Be trusted, Feel worthy, feel better
Low motivation

Anna – Treatment options
Assistant manager
Single mother
Goals – Stay on top of everything, Keep afloat, Keep Justin healthy
Low Motivation
Design Process

- Principles - Desirability
  - Feasibility
  - Viability
- Extensive input from patients and clinicians
- Aim to reduce transactional costs

Justin and Anna

- Scenarios - Anna uses an SMS program to help her prepare for visits

- Possible prototypes - Checklists
  - SMS and email reminders
  - Pre-visit planning digests
  - Online goal and visit tracker
Healthy Foundations Life stage segmentation

1) Unconfident Fatalists

2) Live for Todays

3) Hedonistic Immortals

4) Health Conscious Realists

5) Balanced Compensators


Unconfident Fatalists (UcFs)

- Negative approach
- Lack of control
- Fatalistic Attitude
- Poor health and experience of health
- Lowest motivation
Live For Todays (LfTs)

- Short term view of life
- Healthy life style isn’t fun
- More positive about life but not health
- Very resistant to change segment
- Low motivation

Hedonistic Immortals (HiMs)

- Risk takers
- Value life and future health
- Leading healthy life could be fun
- Anything fun can’t be bad!
- Mid-motivation level
Balanced Compensators (BCs)

- Positive approach
- Look good and feel good
- Full control of their health
- Risk takers but with compensatory mechanisms
- High motivation

Health Conscious Realists (HCRs)

- Control of their lives and health
- Feel good about themselves
- Internally focused aspirations
- Extremely healthconscious
- Least fatalistic
- Highly motivated
English Population

- The five motivation segments
  - Hedonistic Immortals (19%)
  - Live for Todays (25%)
  - Unconfident Fatalists (18%)
  - Health-conscious Realists (21%)
  - Balanced Compensators (17%)
Results

Balanced Compensators, 21-30%
Health Conscious Realists, 38%
Live for todays, 4%
Unconfident Fatalists, 6%

BCs and HCRs differences at IHI

<table>
<thead>
<tr>
<th>Balanced Compensators</th>
<th>Health Conscious Realists</th>
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<tbody>
<tr>
<td>Full control of health as a norm</td>
<td>Often make realistic choices</td>
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<tr>
<td>Individualistic decision making</td>
<td>Shared decision making</td>
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<td>Single minded towards goals</td>
<td>Would welcome support towards goals</td>
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<tr>
<td>Seek information needed from HCPs</td>
<td>Keen to receive information and regular follow up</td>
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<tr>
<td>Driven by wanting to look and feel good</td>
<td>Driven by wanting to feel good</td>
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Second cycle

- Specific Aim
  - Identifying applications of this approach
  - Identifying populations

Liverpool Public Health

- Raise awareness of Cancer
- Increase early presentation to primary care
### Where are they? (bowel)

<table>
<thead>
<tr>
<th>Smoking (heavy)</th>
<th>Alcohol (heavy)</th>
<th>Obesity</th>
<th>Diet (5-a-day)</th>
<th>Deprivation</th>
<th>Screening (non-returns)</th>
<th>Non-elective admissions per 1k population</th>
<th>Mortality per 1k population</th>
<th>Top ranking wards (all factors)</th>
<th>Score</th>
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<tbody>
<tr>
<td>Picton</td>
<td>Woolton</td>
<td>Clubmoor</td>
<td>Central</td>
<td>Everton</td>
<td>Princes Park</td>
<td>Speke Garston</td>
<td>Church</td>
<td>Norris Green</td>
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<td>Church</td>
<td>Norris Green</td>
<td>Kensington &amp; Fairfield</td>
<td>Kirkdale</td>
<td>Riverside</td>
<td>Kirkdale</td>
<td>Greenbank</td>
<td>County</td>
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<td>County, Speke Garston</td>
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<td>Allerton &amp; Hunts Cross</td>
<td>Anfield, Belle Vale</td>
<td>Picton</td>
<td>Speka Garston</td>
<td>Picton</td>
<td>Croxteth, Anfield</td>
<td>Everton</td>
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<td>Childwall</td>
<td>Old Swan</td>
<td>County</td>
<td>Kensington &amp; Fairfield</td>
<td>Croxteth</td>
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<td>Tuebrook &amp; Stonecroft</td>
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<td>Clubmoor</td>
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**What do they look like? (bowel)**

- **Top ranking wards**

1. Norris Green
2. County
3. Kirkdale
4. Everton
5. Speka Garston
6. Kensington & Fairfield
7. Clubmoor
8. Anfield
9. Central
10. Princes Park

**Most deprived in the city / dependant on the state**
- Elderly reliant on state support / live in bungalows on social housing estates / resident wardens
- Lower income workers / urban terraces / often diverse areas
- Low income older couples in former council estates
- Single people of older working age or even pensioners

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*Sue Cumming, Insight Manager, Liverpool Public Health*
Persona Segmentation

Marketing strategy

Objectives
- Raise awareness of the signs and symptoms of bowel, breast and lung cancer
- Increase early presentation to primary care

Unconfident Fatalists
- 20-30% of eligible population
- Least likely to be aware of symptoms
- Least likely to report symptoms
- Recognise they have health problems
- Least users of GPs as captive audience

Strategy
- Targeted campaign to raise awareness of symptoms and confidence presenting to primary care
- Training for primary care
- Encourage word of mouth in community

Health Conscious Realists
- 20-25% of eligible population
- Low disability – Highly motivated
- Already engaged with services
- Most likely to become ‘ambassadors’ for the campaign

Strategy
- Will be receptive to ‘noise’ around campaign and will need little more to raise awareness and prompt presentation
- Encourage them to ‘spread the word’ and be ambassadors for the campaign

INCREASE IN EARLY PRESENTATION

Increase of GP presentations comparing April – Dec 2010 and April – Dec 2011

Bowel = 19.1%
Lung = 7.19%
Breast = 0.58%

Sue Cumming, Insight Manager, Liverpool Public Health
Peter’s Story

Kaiser Permanente Population

Preventing Diabetes Among KP Members

- Entire Pre-DM population received no intervention
- 1/3 of Pre-DM population received lifestyle intervention
- 1/6 of Pre-DM population received lifestyle intervention

445,107 members develop DM by 2023

147,732 members
60,229 DM cases prevented
83,488M savings in 2023 +

57,503 members
57,503 DM cases prevented
57,503M savings in 2023 +

73,300 members
38,114 DM cases prevented
38,114M savings in 2023 +

48,761 members
18,583 DM cases prevented
18,583M savings in 2023 +

852,301 members with pre-diabetes in 2013

2013
10 years
2025

CENTER FOR HEALTH SYSTEM PERFORMANCE

KAISER PERMANENTE
BJ Fogg’s Behavior Change Model

Application of Self-Management Support at Population level

- High motivation segment – Trigger - correct messaging, offering choices, offering information, co-production with health care providers

- Moderate motivation segment – Ability - group/peer support, removal of barriers to achieve targeted behavior, increasing ability

- Lower motivation segment – Motivation - consistent self management support, individual coaching
Key Benefits

- Deep and wide population insight
- Support for prevention agenda
- People Centred approach
- Saves time and resources
- Identification of local and national policy priority

Future Applications

- Integrated Health Care
- Population Health Management
- Patient Experience
- Health IT
Current Needs vs Future Needs

- High risk high cost population?
- Which segments will generate future needs?
- Where can we affect change?
- High motivation spectrums?
- What are the service design challenges?

Thank You