Disease Management Colloquium
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Track: Introduction to Emerging Needs/Looking Ahead in Disease Management

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Introduction to Emerging Needs/Looking Ahead in Disease Management:

Oncology Disease Management

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Who Gets Cancer?

- **77% of cancer cases are diagnosed in people age 55 and older**
- **1,334,100 new cases are expected to be diagnosed this year**
- **556,500 Americans are expected to die each year from cancer**
- **Cost of cancer in 2002 is estimated at $171.6 Billion**
  - $60.9 Billion for Direct Medical Costs
  - $15.5 Billion for Indirect Morbidity Costs
  - $95.2 Billion for Indirect Mortality

Source: American Cancer Society 2003 Facts & Figures

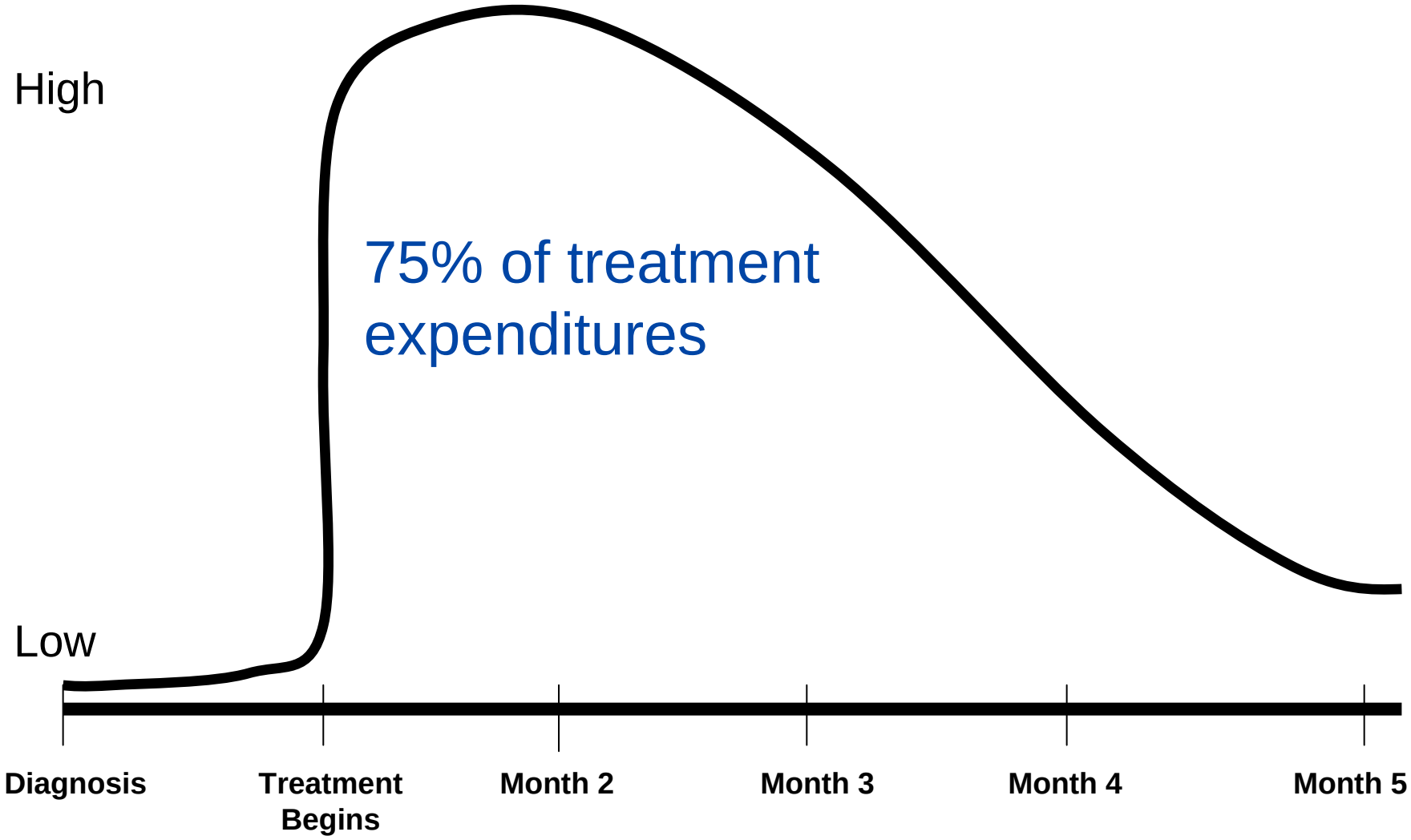
Oncology Disease Management: Issues

- Highly complex field with emerging technologies. Science is advancing rapidly.
- Dramatic increase in the ChemoTx pipeline.
- Primary and secondary prevention efforts are maturing.
- Relatively uninformed patients.
- Weak communication specialist to PCP.
- Public relations issues for health plans.
- Complex administration guidelines and EBM
- Regional organizations of oncologists – “cartels”
- Profit impacting medical decisions on therapies
- End of life care and appropriateness issues
- Underserved and culturally diverse populations at risk
- Cost structure and claims administration complexity

Cancer Disease Management Is…

- Acute while patient is being managed
- Complications/costs are in treatment concurrent
- Specialty knowledge required-”Talk the Talk”
- Interactions with treating physicians
- Assessment is extensive and real-time
- Patient objections are minimal - they need us!
- Family involvement is typical
- Patients “graduate”

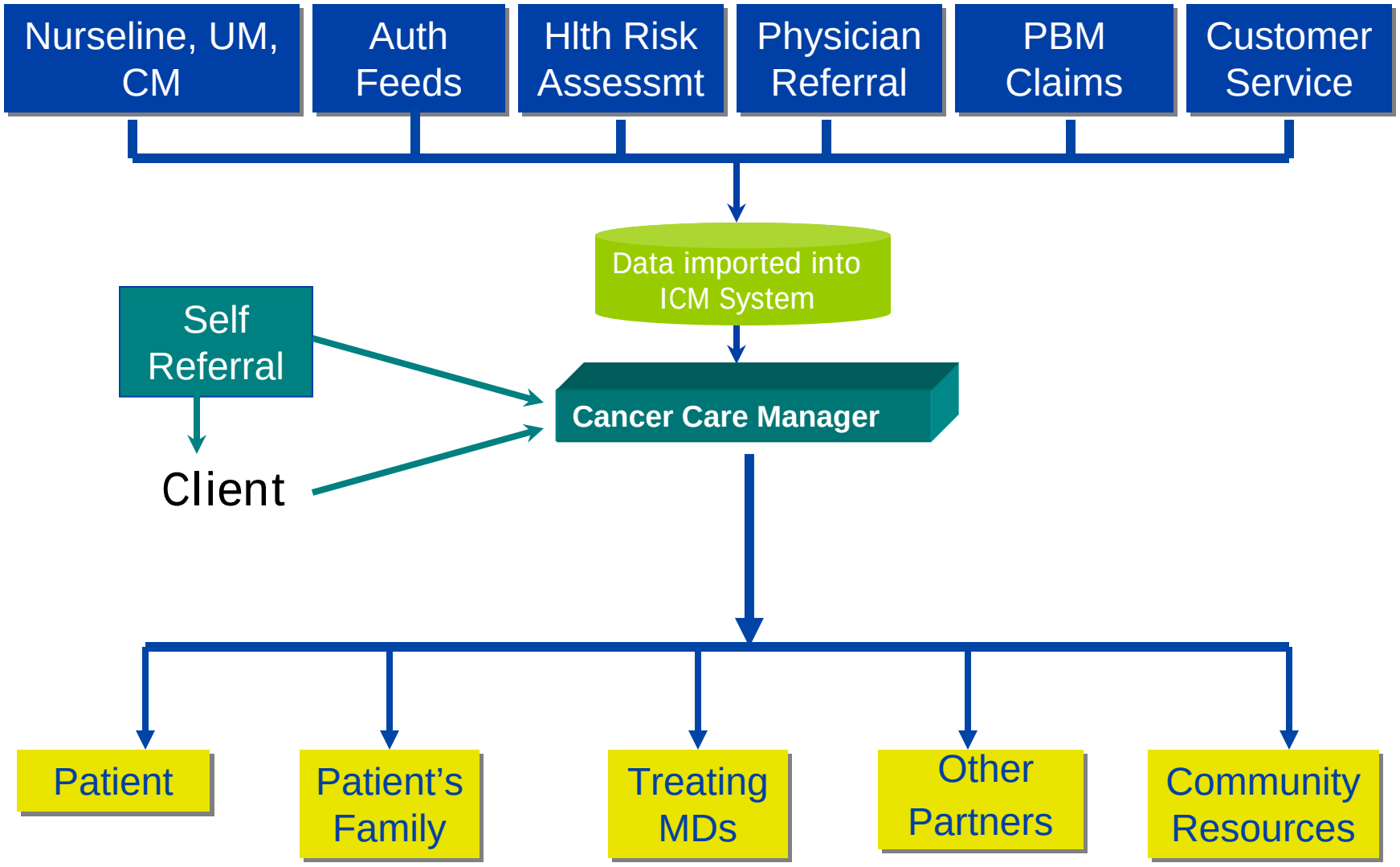
Program Involvement



What to Look for In Oncology DM

- Strong clinical support.
  - RNs, MDs, Advisory Panels, EBM documentation
- Knowledge acquisition and maintenance strategies
- Sensitivity to unique needs of cancer patients
- Primary care nursing model
- Patient centered care and philosophies
- Patient satisfaction surveys and analysis
- Multidisciplinary approach
- Integrated informatics support and capabilities
- Evidence based medicine focus
- Multidimensional media access by patients and staff
- Care navigation assistance
- Informed consent, end of life care, and other similar support
- Collaborative interaction with MDs
- Ongoing followup care
- Comprehensive outcomes assessment

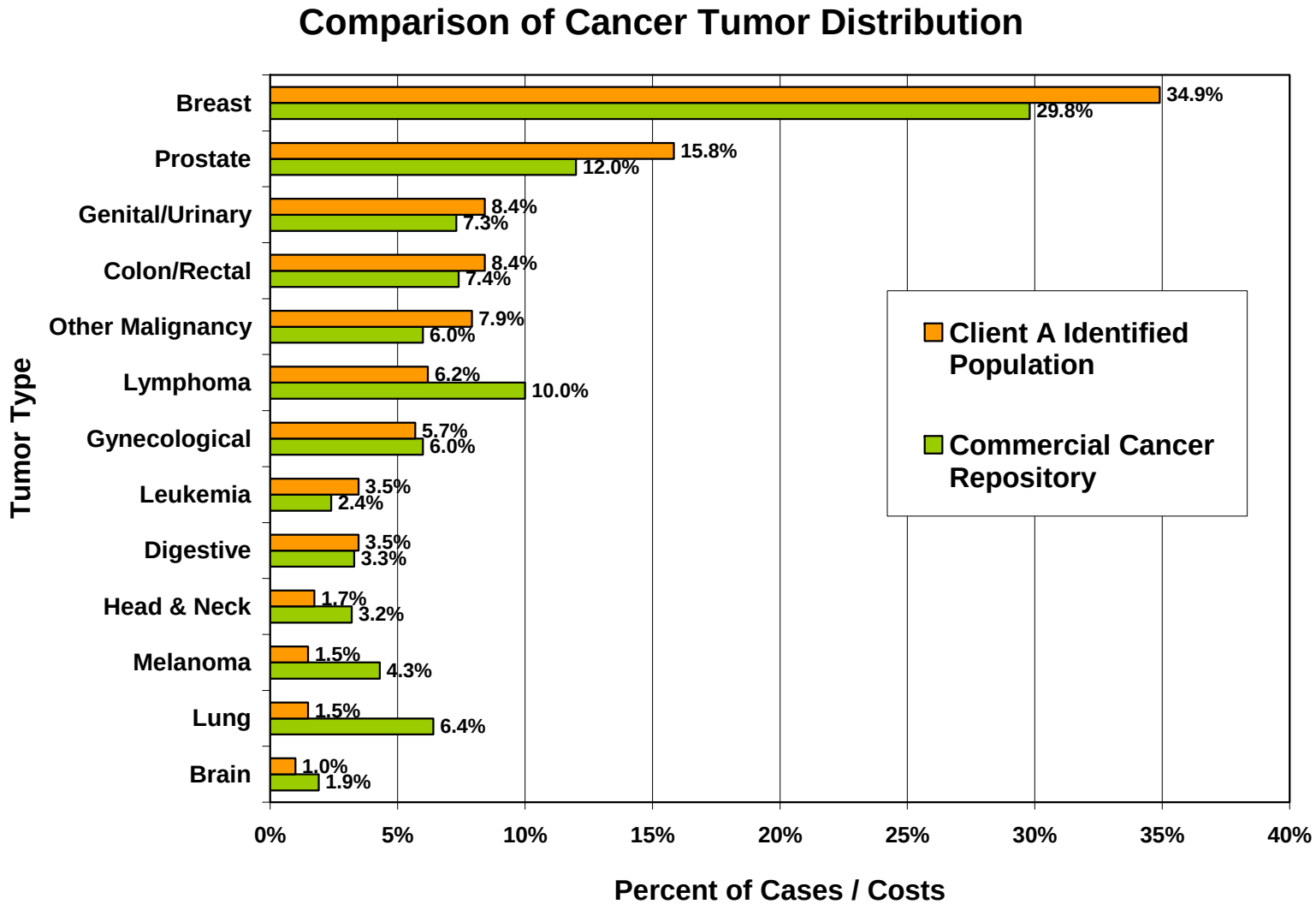
The Integrated Approach to Care



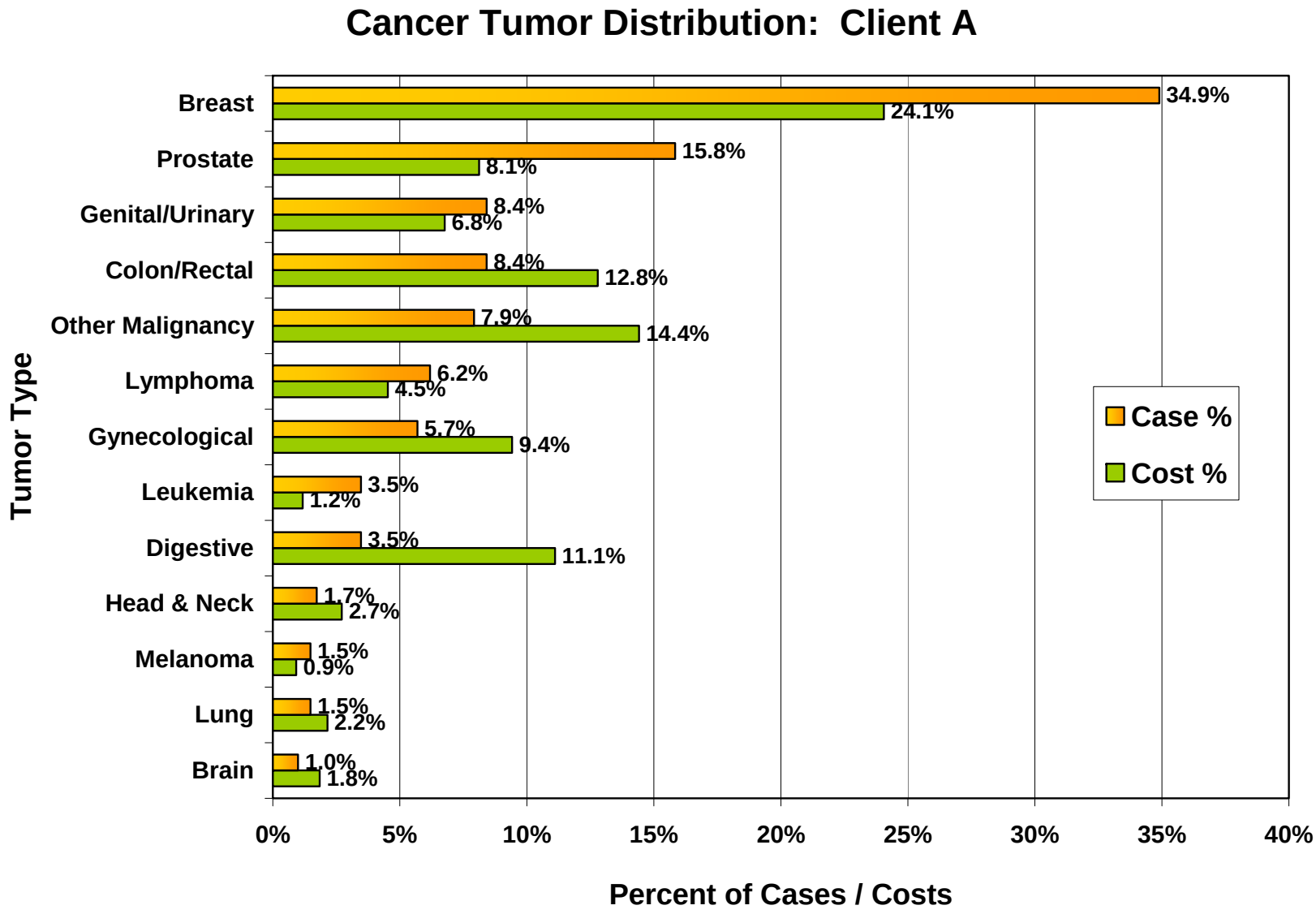
Oncology DM Outcomes

- **Operational indicators**
  - Referral trends
- **Clinical quality indicators**
  - Identification/help correct quality of care issues
  - Access and completion of follow-up care
  - Increase average time from chemotherapy to death
- **Clinical utilization indicators**
  - Increase AD/DPOA
  - Decrease hospice admissions/ALOS
  - Decrease ER/hospital admits
- **Financial impact measures**
  - Average Cost per Case Reductions
  - ROI
  - Decrease chemotherapy costs
- **Intangibles**
  - End of life care
  - Patient satisfaction
  - Physician satisfaction

Trending Comparisons



Data Expertise



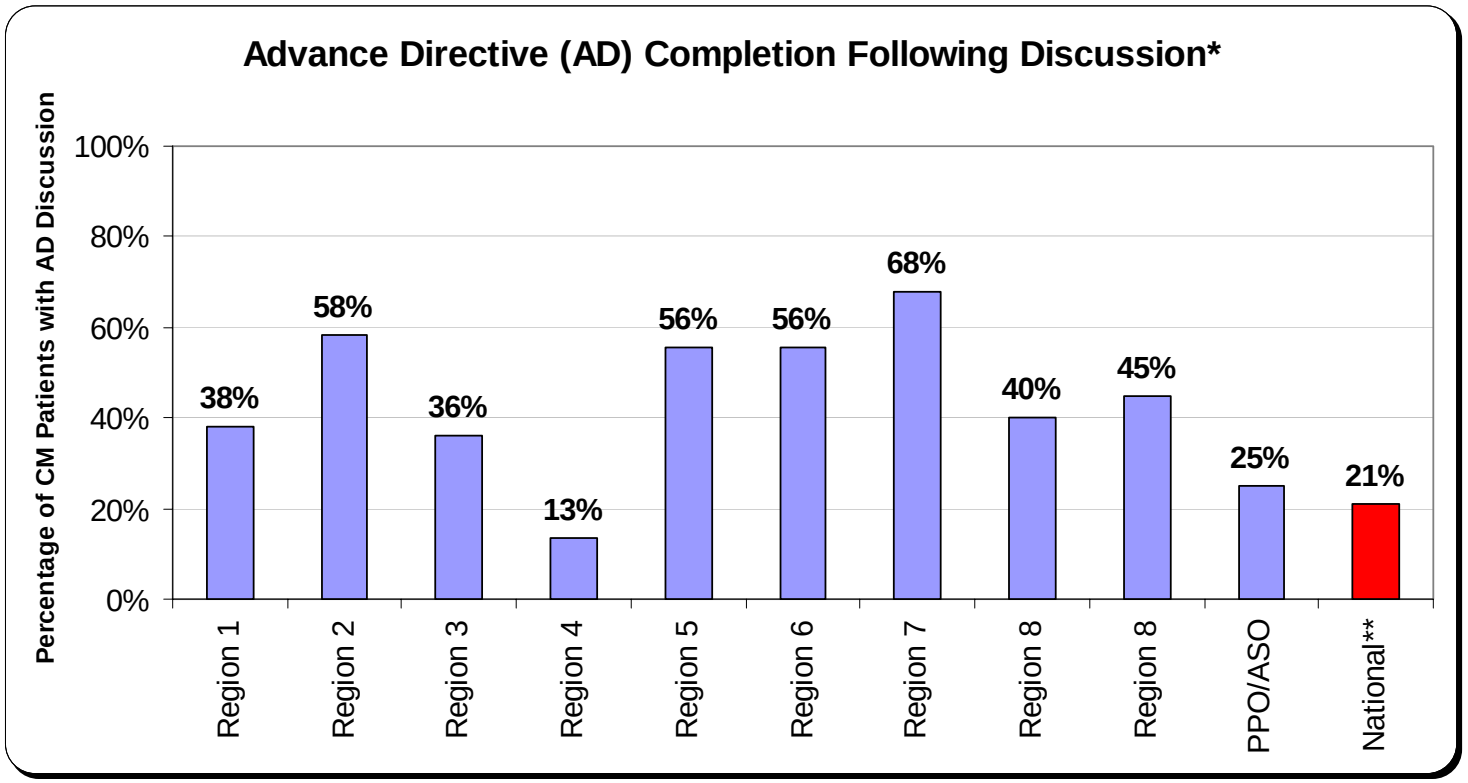
Outcomes Unique to Cancer

- Number and prevalence of patients with cancer by type.
- Presence of a full path report in the chart
- Staging addressed with patients treatment
- Fatigue was assessed and treated
- Pain was assessed and treated
- Hospice enrollment prior to death
- Hospice enrollment less than 7 days prior to death
- Chemotherapy administration less than 14 days before death

Patient Satisfaction

Question	*Average Score*
The QO CM provided me with meaningful information about my cancer and its treatment.	4.38
The info given to me by the QO CM helped me to make informed decisions about the kind of care received.	4.19
The QO CM talked to me about the common side effects of my cancer treatment.	4.32
My QO CM talked to me about how to get medical help for side effects if needed.	4.20
In dealing with the QO CM, I felt my individual needs and preferences were taken into consideration.	4.67
In dealing with the QO CM, I felt my individual needs and preferences were taken into concern.	4.41
The QO CM helped me with the coordination of the care associated with my illness.	4.08
I had good advice from the QO Nurse CM about where to find help in the community.	4.06
The QO CM talked to me about where to find help and support in the community, i.e., ACS., Support Groups, etc.	4.01
The QO CM responded to my phone calls in a timely fashion.	4.43
Contact with the QO CM helped me to better understand my health care benefits.	4.16
QO is a valuable part of my health care benefit.	4.33
Overall, I was satisfied with the service I received from Quality Oncology/the Health Plan's Cancer Program.	4.43
Overall, I was satisfied with the Cancer Care Program.	4.46

Advanced Directive Completion



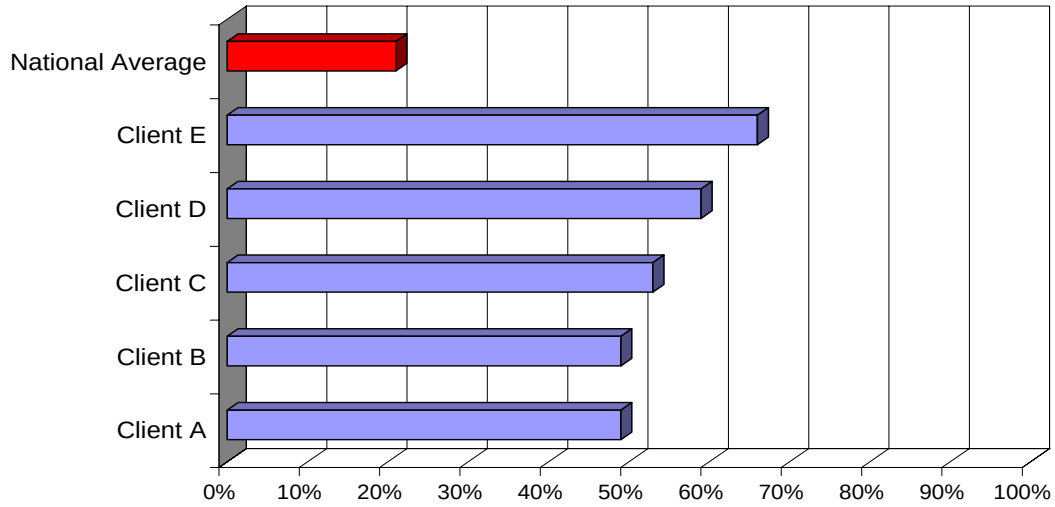
* Advance Directive Completion is defined as a case with written documentation of an Advance Directive, which includes either a living will or power of attorney.

*** Eiser and Weiss (2001) reported that general prevalence rates of completion for Advance Directives were less than 25% nationwide. Eiser, AR. & Weiss, MD. The American Journal of Bioethics, 2001, Fall, 1(4), W10.

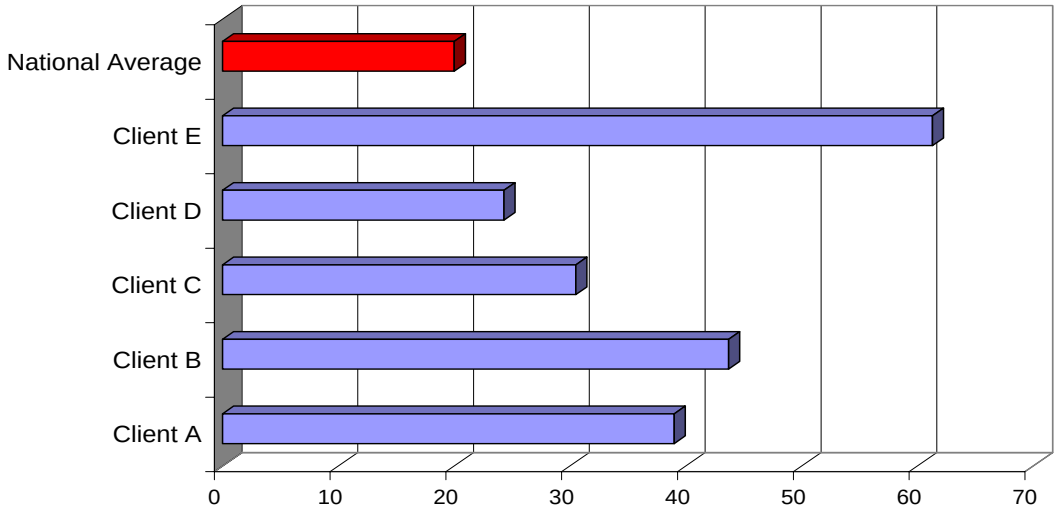
Teno and her colleagues tested the effectiveness of written advance directives on 9,105 seriously ill patients treated in five teaching hospitals. They found that before the intervention only 21% had an Advance Directive. Teno, J; et. al. J. Am Geriatr Soc, 1997, 45: 500-7.

Hospice Usage to National Averages

Hospice Participation



Hospice ALOS



Increasing Participation and LOS in Hospice

Measure	A PY2005 Com	B PY2005 Com	C PY2005 Com	D 10/04-9/05 Com	E PY2005 MA
Patients Expired	477	167	152	37	86
Number Hospice Deaths	233	82	81	22	57
Hospice Deaths Among QO Patients (%)	49%	49%	53%	59%	66%
Average Days in Hospice	39	43.7	30.5	24.3	61.3

Why Carve Out a Program From Routine UM?

- External entities are specifically organized around this complex field.
- Sharp, steep learning curve to develop in house
- Employers with multiple locations can benefit from unified approach to fragmented discipline
- Vendors have software enabled innovations not present in standard CM area.
- Drug reimbursement third party oversight
- End of life care without perceived conflict of interest
- Clinical advisory expertise not locally available
- NCQA certification at DM level

References

- Fetterolf, D. and Terry, R. “Oncology Disease Management” Disease Management. (10)1. pp 30-36.

Introduction to Emerging Needs/Looking Ahead in Disease Management:

Industry Issues in Measuring Impact in "Opt-In" Models

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Opt-In vs Opt-Out

- Opt-Out
  - **Entire population is reviewed with identification process**
  - **All identified individuals are considered enrolled**
  - **Individuals are allowed to opt-out if not interested**
  - **Impact measured is on the total population**
- Opt-In
  - **Entire population may or may not have standard identification process**
  - **Individuals are enrolled if they self refer or are directly referred in by case managers, MDs, etc.**
  - **Individuals participate because their interest is inherent in the participation process**
  - **Impact is assessed for the participation group**

Why Consider Opt In?

- Theoretically, would only pay for those who are in the "high acuity" group. No money wasted on non-active participants.
- Only cooperative and thus engaged people would be participating.
- Theoretically, should be cheaper since a smaller number of individuals is involved in active management.

Issues with Opt In Design

- No standard definition for opt in population
  - Self identified
  - Referred
  - Selected, approached, and accepting
  - Hybrid methods
- Inconsistent selection of managed population
  - No comparison group
- Inability to identify a control or comparison group
  - Selection bias issues

The Academic Literature on Opt In

- The “one shot case study” approach of evaluating such a selected group without a comparison group, “have such total absence of control as to be of almost no scientific value”. Similarly, the “one group pretest-posttest design” where multiple methodological flaws exist with such an approach, which is described “to be worth doing when nothing better can be done” and suffers from multiple threats to internal validity.

- Threats include
  - absence of experimental isolation
  - maturation of the group temporally
  - regression to the mean
  - effect of the known presence of the process to the participants, influencing outcomes.

Campbell, D. and Stanley, J. Experimental and Quasi-Experimental Designs for Research. Boston. Houghton Mifflin Company. 1963. pp 6.

The Medical Literature on Opt In

"the ***opt-in*** approach to participant recruitment, increasingly required by ethics committees, resulted in lower response rates and a biased sample. We propose that the opt-out approach should be the default recruitment strategy for studies with low risk to participants."

Junghans C; Feder G; Hemingway H; Timmis A; Jones M. "Recruiting patients to medical research: double blind randomized trial of "opt-in" versus "opt-out" strategies.." BMJ. (331)7522. Oct 22, 2005. pp. 940.

Observations from the Practical World

- **Lower participation rates**
- **Loss of access to emerging risk groups**
- **Enrollment burden on individual. Individuals in denial, at risk and least motivated do not enroll. Low touch groups are not contacted or encouraged.**
- **Nursing advance of low acuity high risk patients does not occur**
- **Loss of benefits of preventive medicine approaches**
- **Cost of identification remains the same, with minimal cost in operations savings**
- **Lower economic impact in PMPM savings**
- **Inability to calculate ROI in any meaningful way**
- **Elimination of ongoing general population surveillance algorithms, such as periodic database predictive modeling trolling**

So, Why Even Consider Opt In?

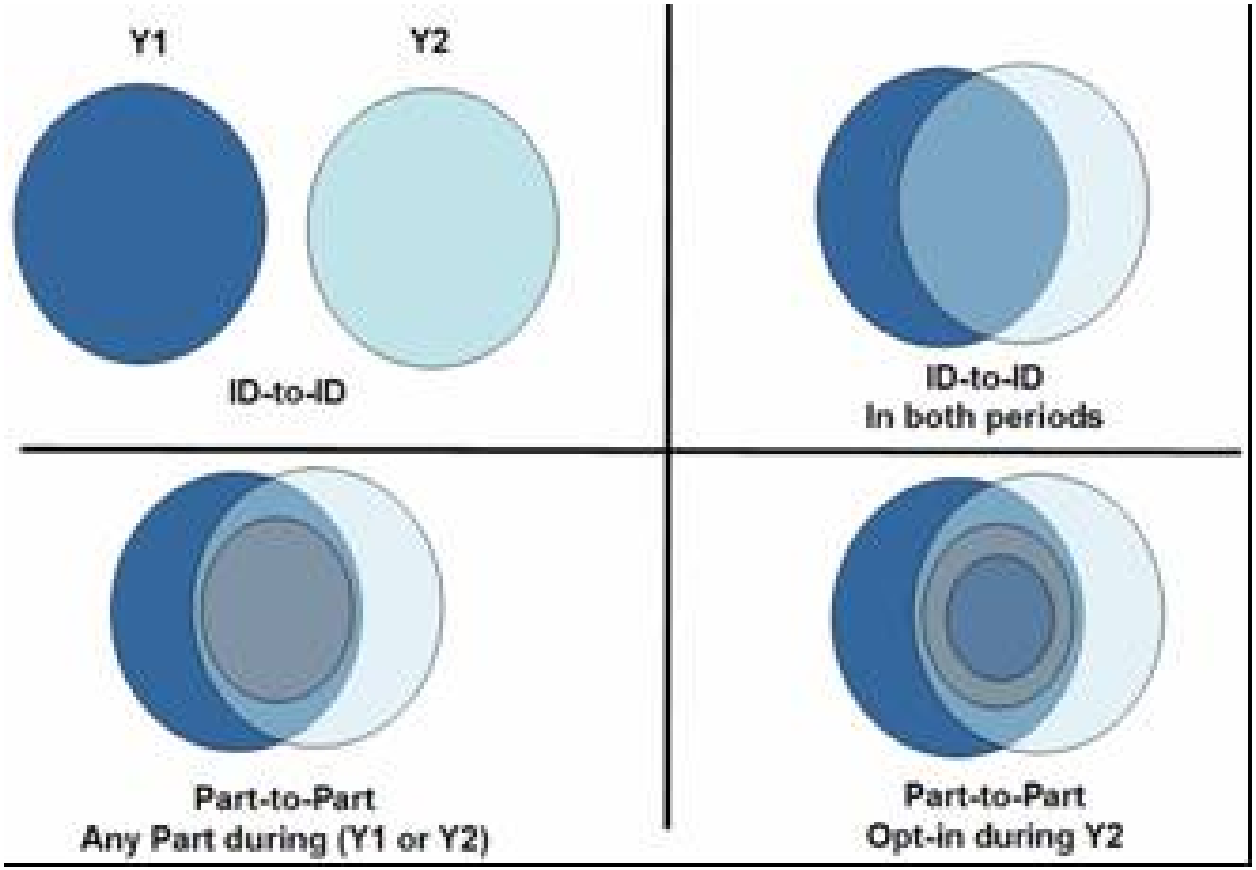
- HR Directors think it might make sense
- Benefit Management consultants think it might make sense

- Both believe “that is where the industry is going”

Bad but Possible Solutions

- Comparison to baseline for a cohort
  - Groups baseline serves as its comparison group. Issue of regression to mean must be addressed.
- "Best effort" control group
  - Comparison group
  - Selection bias not considered
- Non-participant controls
  - Major issues with selection bias need to be addressed
- Matched comparison group
  - Major issues with selection bias need to be addressed
- Predictive modeling guesses
  - Note low R2 real ability of predictive models or propensity models to estimate costs and complex outcomes
- "Reality check" longitudinal monitoring
  - See if a group gets better when the only usual probability is they get worse

Population Relationship Venn Diagrams



Recommendations When Forced to the Wall

- **have some type of comparison or control group.**
- **make attempts to maintain comparability or equivalence with a control group for comparison purposes.**
- **look at changes in the overall population. If the selected group is the key cost driver, then the overall cost needle should move. Why else do it?**
- **deal as much as possible with confounders; at the very least enumerate them.**
- **be simple to run and comprehend; complexity rarely adds much besides false assurances that the elaborate calculation method is somehow better without dealing with the fundamental problems with this design.**
- **present a multidimensional approach to program evaluation, to address the need to understand the economic impact across multiple evaluation points besides estimated financial metrics. These might include:**
  - **operational guarantees that the program is in fact being done**
  - **clinical evidence that important clinical findings linked to future health and cost savings are improving. Scientific evidence suggests that adherence to evidence based guidelines carries both near term and future economic impact**
  - **utilization levels are changing in desired directions for the entire population.**
- **focus on proof that evidence based medicine guidelines are being followed and improved. These have been proven in proper scientific trials**

Conclusions

- The Opt In approach cannot be validated as a scientific approach in any meaningful way.
- Opt In results represent so many potential biases and methodological flaws that meaningful outcomes interpretation must be only at a general level.
- Opt In programs have lower participation rates, lower outcomes and lower financial impact than opt in program
- Opt In programs are minimally less expensive and more cost efficient than opt out programs
- If an opt in method is chosen, evaluation methods need to be multidimensional, looking at various outcomes not directly related to a scientific study type of evaluation. Meeting evidence based guidelines, participant satisfaction, program participation rates etc should be used instead

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Questions?