Are we doing good yet?

Assessing value in Oncology

JR Hoverman MD, PhD
VP Quality Programs, Texas Oncology
Clinical Trial

\[ x\{I (a_1+a_2+a_3 \ldots a_n+b)\} \rightarrow O_1 \]

\[ y\{I (a_1+a_2+a_3 \ldots a_n+b+c)\} \rightarrow O_2 \]

\[ y\{I (a_1+a_2+a_3 \ldots a_n+b+c)\} \rightarrow O_2 \]

\[ -x\{I (a_1+a_2+a_3 \ldots a_n+b)\} \rightarrow O_1 \]

\[ c \rightarrow _{P} O_2-O_1 \]
Subjective Evidence

$I (a_1 + a_2 + a_3 \ldots a_n) + b + c \rightarrow O_1$

$I (a_1 + a_2 + a_3 \ldots a_n) + b + d \rightarrow O_2$

$I (a_1 + a_2 + a_3 \ldots a_n) + b + e \rightarrow O_3$
Value Formula

\[ V = \frac{O}{C} \]
Relative Value

RV1 = O1/C1
RV2 = O2/C2
RV3 = O3/C3
The judge of the relative value of an intervention is first and foremost the patient.

The determinant of that value depends on both empiric and subjective evidence.
Quality

- Quality is that which distinguishes one process from another by enhancing relative value.

- Reducing costs while maintaining empiric and subjective outcomes improves quality.
The Oncology Care System

Discovery of a sign or symptom → self-referral to primary care physician → call for appointment → timely appointment made → physician visit / history and examination → referral to specialist for biopsy → call for appointment → collect or send pertinent history and findings (physical, laboratory and/or imaging) → physician visit → schedule biopsy → technically competent biopsy with adequate tissue → tissue specimen handled and processed appropriately → return appointment with specialist with review of pathology → formulation of plan → treatment scheduled → education regarding treatment initiated → treatment given → follow-up visit with physician to evaluate benefits/toxicities of treatment
The Oncology Care System

Obstacles to Health Care Delivery

- Wait too long for appointment
- Wait too long to see physician, get lab, get treated
- Lost or wrong information
- Missing information
- Wrong treatment
- Complications of treatment
- Travel distance (geographic access)
- Insurance coverage (financial access, affordability)

- Lost work time and income
- Child care availability and cost
- Concern for significant others
- Fear of disfigurement or incapacity
- Loss of control (dignity)
- Burden on family
- Belief system
- Denial
Delivery Metrics: What would constitute system failure?

- Wrong treatment
- Unsafe
- Don’t respect my time, don’t respect me
- Not informed and not participating
- Poor symptom control
- Not dying “in place”
2003 Develop a uniform web-based reporting tool for medication occurrences. Reporting available to any practice

2004 Practice Quality and Efficiency (PQE)

2005 QOPI

2005 Level 1 Pathways for Medical Oncology and Hematology: evidence, toxicity, cost to patient

2009 Innovent Oncology: Pathways, telephonic call system with OCN certified nurse for support for self-management with chemotherapy, Advance Care Plans

2010 800+ Medical Oncologists using a single EHR (iKnowMed – iKM)
Specifics

- PQE – Delivery Metrics
- Pathways – Performance metrics
- Interdisciplinary care
- Patient education and self-management
- Feedback structure
- Incentives
- Tools
Service Metrics: PQE: Lean/Six Sigma

- Reduction in wait times
- Reduced lab cycle times
- Reduced peak flow in infusion rooms
- Eliminated returns to waiting room after vital signs, port draws
- New patient appointments within 2 days
- Re-engineered MD, lab, infusion processes to enhance ideal patient flow
- MD Comment: The atmosphere in the clinic is so much better.
Level I Pathways Development
Key Guiding Principles

Three Phase Development Approach:
- Evaluate Strongest Clinical Evidence for comparable drugs
- Compare Toxicity Profile
- If drugs are clinical equivalent, least costly drug becomes ON-Pathway option

Apply 80/20 Rule:
- Recommend therapies that work for the majority of patients

Clinical trials always considered On-Pathway:
- Current health plan precertification workflows remain unchanged
- Coverage is subject to employer benefit guidelines/limitations

Generally offer Pathways choices for 1st, 2nd, and 3rd line in advanced setting Point-of-care Pathways clinical decision tools provided:
- US Oncology Practices - iKnowMed US Oncology’s EMR
- Non-US Oncology Practices - Web Based Portal

Pathways are reviewed on quarterly basis:
- Participating oncologists are encouraged to provide feedback
# Level I Pathways Development

## A More Precise Approach

<table>
<thead>
<tr>
<th><strong>Level I Pathways</strong></th>
<th><strong>Other Guidelines/Labels</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Regimens are generally recommended in step-wise sequence by Lines of Therapy</td>
<td>General panel of options only. No sequence or preference among options stated.</td>
</tr>
<tr>
<td>Lines of Therapy are limited</td>
<td>NO limits in Lines of Therapy</td>
</tr>
<tr>
<td>Costs to patients and payers are considered.</td>
<td>Costs to patients and payers are NOT considered.</td>
</tr>
<tr>
<td>Structured with implementation tools and feedback mechanism to ensure consistent quality of care.</td>
<td>General document WITHOUT support framework to ensure quality care.</td>
</tr>
</tbody>
</table>
Level I Pathways – Physician Performance

Breast Cancer Pathway
- On-Pathway: 56%
- Off-Pathway: 0%
- Missing: 22%
- Conflicting: 22%

Colon Cancer Pathway
- On-Pathway: 100%
- Off-Pathway: 0%
- Missing: 0%
- Conflicting: 0%

Non Small Cell Lung Cancer Pathway
- On-Pathway: 60%
- Off-Pathway: 0%
- Missing: 0%
- Conflicting: 40%

Other Pathways
- On-Pathway: 17%
- Off-Pathway: 17%
- Missing: 0%
- Conflicting: 67%

% Pathway Adherence - All Pathways Rolling 6 Months
- Monthly Adherence
- Avg Adherence

Off-Pathway Exception Reasons for All Pathways
- Number of Off Pathway cases: 3

% Exceptions Documented - 0%
Premier Standard > 10%
Pathways Potential

- Include consultation recommendations on Pathways, including Advance Care Planning

- Integrate Medical, Radiation and Surgical Oncology Pathways

- Retrospective review of multidisciplinary treatment of specific diseases

- Patient portal

- Virtual tumor board

- Defines the role of a patient navigator/support nurse
Multidisciplinary metrics

- Appropriate radiation for breast cancer (UHC)
- Drug compliance with hormonal therapy >70% (UHC)
- Appropriate pre-op imaging for lung cancer (UHC)
- Colon pre-op evaluation including imaging, CEA, colonoscopy (UHC)
- Appropriate XRT for rectal cancer (UHC)
- Radiation therapy for Stage 1 lung cancer – lower is better (QOPI)
Patient Education and Self-management

- Standard education packet including red/yellow/green for symptom management.
  - ACP discussion
  - Questions to ask
  - Chemo teaching by RN/ML
- Supplemental disease and community relevant information
- Innovent: PSS OCN call, ESAS each call, ACP/AD info, reporting into EHR
- Metrics – enrollment, ACP discussions, hospice enrollment, hospital, ER, symptom management
Feedback

- Cancer Center Specific Quality Committees
- Committed nurse + physician – jackpot!
- Metrics: Pathways
  - Service
  - Patient-centered: communication, symptom control
  - Resource use
- Incentives – internal reward for high performance
Metrics in an EHR World

- The EHR is a yes/no environment
- Text search is expensive with uncertain validity
- Metrics data points have to be recorded on every patient
- Every physician needs performance reporting
- EHR primary function is not patient metric documentation nor reporting
- Extra clicks take time
- This means that clinic processes will have to change
Do we have the right tools?
11. Chemotherapy intent discussion with patient documented.

18. Chemotherapy treatment summary provided to patients.

24. Patient emotional well-being assessed within one month of first office visit.

35. Pain assessed and addressed appropriately in the last 2 visits before death.

39. Dyspnea assessed and addressed.

42. Hospice enrollment.
Nurse Note – ESAS SOB result with comment

Shortness of breath with level 8 and comment creates a message at the top of nurse note in red font.
Nurse Note – Patient Assessment with Dyspnea

Dyspnea showing under Patient Assessment in Nurse Note with full set of possible attributes to elect. Positive attributes are shown in nurse note with red mark in corner of box. Attributes shown in line below.
The nurse has the option of sending a chart message to the MD regarding the “Positive” of shortness of breath while still in the nurse note, however, the standard should be to notify the MD by phone or in person of any significant positives during a patient visit.
End of Life/Death Detail iKnowMed

<table>
<thead>
<tr>
<th>Date of Death</th>
<th>Major cause of death</th>
<th>Treatments within last 2 weeks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospice care</td>
<td>Time from when last seen by o...</td>
<td>Location at time of death</td>
</tr>
<tr>
<td>Death Reported to coroner</td>
<td>Autopsies</td>
<td>Patients family contacted</td>
</tr>
<tr>
<td>Sympathy card sent</td>
<td>Hospice care</td>
<td>Comment</td>
</tr>
</tbody>
</table>

- Under hospice care
- No longer on hospice
- The patient was offered a referral to hospice but declined the offer.
Headwinds

- National average practice size: 3-4
- Median drop in oncology practice income 2007-2008: 25%
- Seeing more new patients (350+ per year)
- Most practices are single specialty
- Even within practices, software platforms do not talk to each other: med onc, rad onc, urology, pathology, imaging, practice management - all different
Measuring Effectiveness

- A comprehensive, evidence-based suite of recommended regimens serves as the basis for a patient-centered delivery system.
- Patient education and self-management build on the template of these regimens.
- Systematic evaluation of symptoms either in the clinic or telephonically improves symptom control.
- There are few multidisciplinary care metrics in the community.
- EHR is required for point of care regimen selection and planning, measurement and reporting but current capacity falls short of need.
- Research into parsimony in quality metrics is needed.
- Rework of clinical processes is required.
- The potential is great.