## A. Cover Page

1. Title: Innovating patient-facing care pathways in breast cancer using the 4R model, 4R = Right Information / Care / Patient / Time

#### Grant ID Number: 35746269

Main Collaborators: Northwestern University Chicago, IL Montefiore M-E Center for Cancer Care Bronx, NY Mercy Hospital and Medical Center Chicago, IL The Center for Business Models in Healthcare (Executive Frameworks, Ltd.)

## 2. Abstract:

ASCO's "Criteria for High-Quality Clinical Pathways in Oncology" calls for development of multimodality patient focused pathways. However, clinical pathways are typically created for provider use. The innovative 4R model, developed by the Center for Business Models in Healthcare and Northwestern University, offers an approach to create cancer care pathways which empower patients in conjunction with their care team. 4R model is Right information and Right care for the Right patient at the Right time. This project will implement the 4R model for a target population of breast cancer patients and care teams at two major safety net institutions. 4R will be implemented at each site using Comprehensive Dynamic Trial (CDT) methods, an adaptation of Edward Deming's PDSA (Plan-Do-Study-Act). Metrics will be collected prior to the implementation (historical) and after the implementation to assess the impact of the project.

The 4R model incorporates the recommendations for patient-centric care pathway plans from the Institute of Medicine, Medicare's Oncology Care Model (OCM), and National Comprehensive Cancer Network's guidelines including: multi-modality planning from diagnosis to survivorship or hospice, specifying clinical team and their responsibilities; and inclusion of definitive and supportive cancer care in the plan. Use of 4R Sequences engages the patient and family in a personalized, systematic and effective way. Additionally, the 4R model addresses complexities of cancer care, such as challenges coordinating timing and sequencing of interdependent guideline indicated care events (Taplin et al, JOP 2015). These challenges lead to care delays, breakdowns, and sub-optimal changes to the care trajectory. These challenges are especially pronounced for vulnerable populations.

**Overall Goal:** To help breast cancer patients, their families/caregivers, and their care team manage guideline indicated care through use of 4R patient care sequences/pathways.

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**C. Reviewer Comments** (not to exceed 1 page) *Please briefly describe how you addressed any review panel comments you were provided following their review of your letter of intent. No comments were provided by reviewers* 

## D. Main Section of the proposal

D1. Overall Goal & Objectives: This project's overall goal is to help breast cancer patients, their families/caregivers, and their care team manage guideline indicated care through use of 4R patient care sequences/pathways. The 4R (Right Info and Right Care to the Right Patient at the Right Time) model uses project management discipline principles to implement a comprehensive care plan pathway which helps cancer patients and their clinical care teams to create a personalized, patient-specific "care project plan" of treatment, support services, genetic assessment and testing, overall care and quality of life, incorporating the patient's goals, decisions and choices, including transition to survivorship care, and end-of-life decisions.

The 4R Model applies the basics of the project management discipline to team-based care

planning, delivery and patient engagement. It considers an episode of cancer care as a project for an individual patient and her care team. This follows an IOM recommendation to use Systems approaches to optimize cancer care delivery (IOM 2005).

According to the 4R conceptual Model (Figure 1):

Each patient receives a 0 personalized "care project plan" called 4R Sequence/pathway of Care

0

- 4R Sequence/pathway outlines 0
  - care for the patient, including definitive and supportive care, from diagnosis through treatment into transition to survivorship or hospice 4R Sequence/pathway puts the care plan on a visual time scale, showing approximate timing, relative order / sequence and dependencies for key care events, helping patient and clinical
- team prioritize and schedule care in an optimal fashion. 4R Sequence/pathway is created at diagnosis from a pre-developed template and is updated as needed during care.
- At transition to survivorship, the 4R Sequence/pathway informs development of treatment summary and is transformed into a Survivorship Sequence of Care.

Overall Goal: To help breast cancer patients, their families/caregivers, and their care team manage guideline indicated care through use of 4R patient care sequences/pathways.

Objective 1: Implement 4R Care Sequences to support vulnerable breast cancer patients. This project will implement a quality improvement of 4R care pathway/sequences for breast cancer patients (stages 0, I, II, III, IV) treated at Mercy Hospital and Medical Center, Chicago, Illinois and at Montefiore Medical Center, Bronx, New York



*Objective 2:* Measure impact of 4R Care pathway sequences comparing a historical cohort to the implementation cohort

*Objective 3:* Conduct dissemination activities with other safety-net settings to share results and experiences.

#### D2. Current Assessment of need in target area

*D2a. The Need:* The 4R model is a novel approach to facilitate personalized cancer planning, as a vehicle of patient enablement and team-based care delivery. The 4R model addresses the following national **needs and challenges**:

- What should be available is **personalized**, **multi-modality plans** for the episode of care, which help the patient and clinical team manage complex care interdependencies. What is in existence at most sites is a domain care plan (surgery only) at best. What is in place today is a care plan at the point of survivorship.
- There should be team-based cancer care, beyond a multi-disciplinary clinic visit, as **ongoing care delivery teamwork** performed asynchronously, across specialties, practices and institutions. What is in place today varies by institution, often with the team based care only occurring in the tumor board / multi-disciplinary conference setting.
- What is undeniable is the challenge of **managing interdependent care**, which requires **timing and sequencing** of care events across specialties. Management of interdependent care is described as the core of teamwork (Taplin et al, JOP 2015)
- What should be is **engagement of the patient and family** in a personalized, systematic and effective way.

What is recommended by several National Academy of Medicine reports (IOM '11, '13, '14) and is required by new payment models, such as CMS's Oncology Care Model (OCM), is providing newly diagnosed cancer patients with a multi-modality care plan. Per IOM, the care plan should be updated as need during treatment and shared by patient/family and the clinical team for optimal care delivery.

In many institutions, patients receive survivorship care plans, but not cancer care plans at diagnosis or during treatment. What is needed is patient-centered treatment planning at diagnosis and during treatment, which improves patient self-management and engagement in care, and prepares patients to understand and fully benefit from a survivorship care plan (Balogh et al, Oncologist 2001).

The 4R model incorporates the recommendations and requirements for patient-centric care planning (IOM, CMS's OCM), including: multi-modality planning; planning horizon from diagnosis to survivorship or hospice, specifying clinical team and their responsibilities; and inclusion of definitive and supportive cancer care in the plan informed by patient preferences. In addition, the 4R model addresses complexities of cancer care, such as challenges coordinating timing and sequencing of interdependent care events. These challenges are experienced by both clinicians and patients and lead to care delays, breakdowns, and sub-optimal changes to the care trajectory.

The 4R model was developed by the Center for Business Models in Healthcare (CBM-HC) and Northwestern University. It was a result of multi-year care delivery research, patient focus groups, and four multi-disciplinary roundtables, including patients, clinicians and payers.

D2b. Quantitative Baseline Data Summary: The 4R model was featured in the NCI-ASCO Teams in Cancer Care Delivery Project (Trosman et al, JOP 2016) and in the special issue on patient engagement and patient / family centered care (Weldon, JACR 2016).

Pre-pilot data collected via patient survey Trosman, JR et al. J Clin Oncol 35, 2017 (suppl 8S; abstract 55).								
Aspect of care planning / enablement – prior to 4R % pts answered "No", N = 197								
Received any Written Care Plan at appointment after diagnosis	55							
Seldom overwhelmed during care	43							
Had a lead clinician manage your care	39							
Communication among providers excellent / good	37							
Care plan clear / very clear	32							
Able to manage own care well / very well	31							
Care managed well / very well by providers	29							
Know stage of your cancer	20							

A patient's comment from our pre-pilot survey best conveys this: "I think some docs do a really good job of outlining the care plan, like my doc, Dr. X, but unless you have family in the room who are taking notes, the whole situation is incredibly overwhelming. A charted plan, like the 4R Sequence, would help memorialize this discussion and perhaps relieve the doc from discussing it 1000 times."

A pilot of the 4R model in early breast cancer is close to completion at 3 Chicago institutions: academic (Northwestern), community (Lake Forest Hospital) and community at point of surgical visit (Mercy Hospital). To date, over 160 early breast cancer patients have received 4R

Sequences across the 3 sites. Postpilot data collection is underway, and results to date indicate that 75% of patients found 4R sequences "Very Useful" or "Useful". Initial pilot results also show improved timeliness and appropriateness of care, as measured according to the pilot metrics.

Questions / Endpoints	Historical cohort (N=162)	4R cohort (N=160)	
1. Patient goal of care discussion for newly diagnosed patients Patients whom had a "goal of care" discussion documented in medical record	2%	99%	<0.0001
2. Distress Screening Patients screened before treatment initiation or surgery, but no later than 30 days after diagnosis	11%	96%	<0.0001
3. Neoadjuvant therapy Patients receiving neo adjuvant therapy	7%	16%	=0.0133
4. Oncofertility consult and services Patients who received consult (*under the age of 50)	14% (6/42*)	24% (10/41*)	NSS =0.2773
5. Dental referrals, patients receiving referral to dentist Patients who completed dental work prior to treatment, **based on patient reported outcomes from survey	0%	77% 50% (54/109**)	<0.0001
<ul> <li>6. Genetic / Hereditary Assessment</li> <li>Patients who were referred to genetic counseling</li> <li>Patients who received results prior to treatment/procedures</li> </ul>	7% 63% (7/11)	40% 81% (52/64)	<0.0001 NSS =0.2334
7. Referral to Primary Care Physician (PCP) Patients who saw PCP within 45 days of cancer diagnosis	16%	77% ref to PCP 50% Flu shot before treatment (55/109**)	<0.0001

## D3. Target

Audience: Breast Cancer Patients (stages 0, I, II, III, IV) at Mercy Hospital and Medical Center, Chicago, Illinois (~ 200 a year) and at Montefiore Medical Center, Bronx, New York (~780 a year); families/patient caregivers (200); clinicians and cancer center staff (20). Mercy Hospital and Montefiore serve vulnerable patient populations.

Primary Target: Breast Cancer Patients

- a. Level of commitment: Breast cancer patients are typically very engaged in their care. This proposal will request a patient survey conducted at two points with different patients. The first point will be a patient survey during the current state and gap analysis, the second point will be after the 4R plans are implemented. Patients will be offered the survey during their medical oncology appointment. The survey will contain no protected health information, it will be de-identified, and will focus on care planning and delivery.
- b. Impact on goal: Breast cancer patient input is essential to the project goal of improving quality, appropriateness and timeliness of comprehensive care.
- c. Benefit from project outcomes: Breast cancer patients receive a care pathway plan that is personalized to their specific needs, wishes and treatment. The plan will improve patient's understanding of her cancer care and will enhance patient's ability to manage her care.

## Secondary Target: Family and Caregivers of Breast Cancer Patients

- a. Level of commitment: We value input of family and caregivers and want to incorporate the input into the comprehensive dynamic trial (CDT) process. Family / caregivers will be offered a survey during the current state and gap analysis and a different set of family / care givers will be offered a survey after 4R pathway plans are implemented.
- b. Impact on goal: Family and caregivers are often very involved in breast cancer patient care, helping with practical needs, participating in appointments as a second set of ears and assisting in other ways. Having a 4R pathway plan available for breast cancer patients to share will help them describe their care and identify specific areas they want assistance from family and caregivers.
- c. Benefit from project outcomes: Clear care pathway plan for the patient they are supporting. The ability to support the patient's cancer care journey in a more effective and informed fashion.

## Other Target: Radiology & Imaging

- a. Level of commitment: The project team has a solid working relationship with the leaders of the breast imaging centers at both sites. The Radiology & Imaging teams will be asked to complete a short clinician/staff survey before and after the 4R care pathway plans are implemented. They will also provide input to the care pathway plan.
- b. Impact on goal: Radiology/imaging is often the entry point into care for breast cancer patients through an image guided biopsy. This audience supports the project goals by being aware of how care should be initiated for Breast cancer patients.
- c. Benefit from project outcomes: structured timing and sequencing of imaging.

## Other Target: Pathology and Diagnostics

- a. Level of commitment: The pathologists and their team will be invited to participate in a short clinician/staff survey before and after the 4R care pathway plans are implemented. They will also provide input to the care pathway plan.
- b. Impact on goal: Breast cancer patients may need additional tumor tests to determine personalized adjuvant therapy including clinical trial options.

c. Benefit from project outcomes: structured timing and sequencing of diagnostic tests.

Other Target: **Surgical Oncology:** Surgeons, mid-level providers (MSN, APN, PAs), nurses, patient service reps, navigators, clinical trials support

- a. Level of commitment: Surgeons have been supportive of 4R care plans and they want patients to have the best care possible. Both sites have surgeons committed to using 4R care pathway sequences with their breast cancer patients.
- b. Impact on goal: Surgeons are often the first provider describing, at a high level, the cancer care continuum for early breast cancer patients. Surgeons will drive the content on the 4R care sequence plan for patients who have surgery first, and the 4R care sequence plan that is provided to patients after completing neo-adjuvant therapy.
- c. Benefit from project outcomes: Holistic care pathway plans that includes supportive care activities, addresses patient practical needs that often impact care delivery and provide a pathway of direct care.

Other Target: **Medical Oncology:** medical oncologists, mid-level providers (MSN, APN, PAs), nurses, patient service reps, navigators, clinical trials support

- a. Level of commitment: Medical oncologists provided the initial impetus behind the 4R care model by providing sample patient cases where care was not optimal. They have been supportive of 4R care plans and they want patients to have the best care possible.
- b. Impact on goal: Breast cancer patients often view their medical oncologist as their primary caregiver through their course of care. Medical oncologists will benefit from having a plan that includes all aspects of care.
- c. Benefit from project outcomes: A holistic care plan that includes supportive care activities, addresses patient practical needs that often impact care delivery and provide a sequencing of direct care.

Other Target: **Radiation Oncology:** radiation oncologists, nurse, radiation therapists, clinical trials support, navigators, schedulers

- a. Level of commitment: Radiation oncology resources are enthusiastic about the QI of providing patients with updated 4R care pathway plans.
- b. Impact on goal: The 4R care pathway will be updated at radiation oncology to support the patients ongoing care, radiation schedule, and other care needs.
- c. Benefit from project outcomes: Clear inclusion on care team.

Other Target: **Primary Care:** patient's primary care team of physician, nurse, medical assistant, administration

- a. Level of commitment: A patient's primary care team assists patient's with health needs, immunizations and co-morbidity management. Given the number of primary care providers that work with the project sites, commitment will be obtained at a patient level with specific interactions to share the patient's 4R care plan.
- b. Impact on goal: Many patients have a long-term relationship with their primary care team and rely on that team to obtain high quality care. The 4R plan will help the primary team understand the full picture

c. Benefit from project outcomes: With the primary care team linked into the 4R care plan they will have a more holistic perspective of the patient's care.

Other Targets: **Supportive Oncology (Distress Management):** social worker, psychologist, psychiatrist, support groups **Cancer Genetics:** genetic counselor, geneticist physician; **Nutrition:** dieticians; **Physical Med, Rehab:** physical therapist, occupational therapist; **Palliative care:** palliative specialist physicians, mid-level providers (APN, MSN), nurse, social worker, chaplain; **Dental Health:** dentist, hygienist

- a. Level of commitment: The project team will work with Social Work, Psychology, Genetics, Nutrition and Physical medicine of the project through their participation in surveys and adaptive workshops. Dental health will be involved at an individual patient level.
- b. Impact on goal: For each patient to have a complete 4R plan, all appropriate care and services must be included.
- c. Benefit from project outcomes: Clear inclusion on care team.

Replication/Expansion: The 4R methods used on this project will be available for other sites to replicate or expand on for breast cancer patients.

## **D4. Project Design and Methods**

*D4a.* The project will further design and implement the 4R model for breast cancer patients. The 4R Method and components include:

- 1. 4R-Care-Sequences:
  - Breast cancer care plan templates, from the point of care initiation next generation of a checklist: updated template at each care transition
     *Care planning pathway, Early Breast Cancer*
  - Personalized to patient clinical characteristics, comorbidities, life stage, needs & choices
  - Includes supportive care (palliative care, psychosocial/distress, nutrition)
  - Use of project management principles, timing, sequencing, dependencies,



Care planning pathway, Advanced Breast Cancer



- roles / responsibilities for all care events, with milestones and checkpoints
- 2. Clearly defined goal of care (e.g., cure or prolong life while maximizing quality of life)
- 3. Cross-organizational, cross-domain 4R care team, including patient / family.
  - All members have assigned responsibilities, especially for care between domains
- 4. Metrics aligned to the IOM dimensions of quality

Throughout the project, the team will use Comprehensive Dynamic Trial (CDT), a methodology to study how implementation and adaptation of clinical procedures and intervention strategies affect outcomes of interest over time. Using CDT, the sites will designate a panel of stakeholders to systematically review data about patient needs, system performance and

outcomes. Based on these data, stakeholders will propose improvements of 4R plans. Changes may include better ways to involve patients and caregivers, improving understanding of the care plan/pathway, overcoming barriers to coordinated care, and creating opportunities to enhance patients' and families' self-care management skills. Throughout the project, we will monitor what steps were needed to successfully develop and implement 4R plans for patients with different needs and resources in safety-net settings serving vulnerable populations.

## *D4b. Describe the way the project planned addresses the established need and produces the desired results.*

The project will use the 4R Oncology Model to implement a quality improvement using patientfacing care plans/pathways:

- Each breast cancer patient receives a personalized "care project plan/pathway" called 4R Sequence of Care outlining definitive and supportive care, from diagnosis through treatment, transition to survivorship or hospice (in patient preference of English or Spanish)
- The 4R Sequence/pathway puts the care plan on a visual time scale, showing approximate timing, relative order / sequence and dependencies for key care events, helping patient, family, caregivers, and clinical team prioritize and schedule care in an optimal fashion.
- Each patient's 4R Sequence is created at diagnosis or first appointment at cancer center from a pre-developed pathway template (based on NCCN guidelines), updated as needed.
- At transition to survivorship, the 4R Sequence informs development of treatment summary and is transformed into a Survivorship Sequence of Care.

D4c. Indicate how you will determine if the target audience was fully engaged in the project. We realize that this project will require organizational and behavioral change. Our team is confident that we have important success factors in place that will support the project and allow us to effectively prevent and / or mitigate challenges. We use two important methodologies to inform this project and mitigate challenges: (1) implementation science for health care interventions, specifically the Comprehensive Dynamic Trial method and (2) multilevel interventions in health care, advocating the necessity of addressing a multi-step care process, vs. addressing one individual care event at a time, and providing tools for mitigating challenges (JNCI Monographs, No. 44, 2012). To facilitate the project and perform change management, we will use the PDCA / PDSA approach (plan-do-check-act / plan-do-study-act) to react to unforeseen and unintended consequences in a timely fashion and incorporate participants' initial feedback. These include the impact on cancer care delivery / site operations and workflow. Feedback will be received through the site workshops and through survey feedback from patients, family/caregivers and clinicians.

## D4d. Originality

Using project management methods via 4R Care sequences/pathways is original. The 4R model has been featured in the NCI-ASCO Teams in Cancer Care Delivery Project (Trosman et al, JOP

2016) and in JACR special issue on patient engagement and patient / family centered care (Weldon, JACR 2016). Current oncology initiatives do not address the challenges of proper timing, sequencing, and cross-domain care delivery:

- Care coordination models don't address fragmentation across domains or care organizations:
  - Patient navigation helps the patient shuttle between care domains, but typically does not connect physicians, care plans or treatment decisions
  - Oncology Medical Home is centered around a medical oncologist and does not address other domains and treatments / services
  - Multi-disciplinary care models are costly, cumbersome and do not act across cancer care continuum or organizations. Teams miss a "lead" or "captain"
  - Care checklists and plans do not provide timing, sequencing of care, and do not assign responsibilities for many care services
- Treatment pathways focus on cost containment, and on onco-therapy only (~25% of costs)
- New payment models (Bundled payment, ACO) require care coordination but lack effective coordination approaches. Create disincentives to some care services.
- Seminal reports and recommendations, e.g. **IOM 2013**, provide recommendations but not tools and specific mechanisms.

## D4e. How project builds upon existing work

<u>This project builds off the metastatic breast cancer 4R pilot that is underway at Northwestern</u> (supported by a Pfizer/NCCN grant) and <u>the early breast cancer (stages 0-III) pilot that is</u> <u>wrapping up at Northwestern and Mercy.</u> This project will expand on the initial pilot at Mercy, 30 patients getting 4R care plans/pathways at breast surgeon appointment, to the use of 4R care sequences/pathways throughout all points in care: multi-disciplinary clinic, surgical oncology, medical oncology, supportive care and radiation oncology.

Development of the supportive oncology care component of the 4R model. In addition to developing the overall 4R model, we have developed the 4R component for supportive oncology, which is integrated into the overall care delivery for patients who need it, especially metastatic patients, funded by The Coleman Foundation. We developed the supportive oncology component working with 35 organizations in the Chicago area: 13 cancer treatment sites, 14 cancer support centers, and 8 hospice centers. The supportive oncology component is under quality improvement implementation at 10 Commission on Cancer accredited Chicago cancer centers and includes a supportive oncology screening tool (which is based on the NCCN distress tool, the PHQ-4, PROMIS short forms and item banks, FACIT-Spirituality, MNA-SF and input from over 100 stakeholders).

<u>Patient Navigator Studies.</u> Our team has held several NIH and foundation awards to study breast cancer patient navigation in a variety of health care and community settings.

## D4f. Will tools be available publicly at no cost?

Yes, we will make content and tools available publicly at no cost. We have done this with our past projects and would do so with this project as well.

## **D5. Evaluation Design**

The project outcome is the implementation of the 4R model for breast cancer patients and improvement in delivery and coordination of care that is included in patients' personalized "care pathway plan" based on patient expressed preferences and clinical guidelines. This will be evaluated based on:

- 1) Historical Patient cohort survey: patient, caregiver, family survey, representing patients who did not receive 4R care pathways
- 2) 4R Patient cohort survey: patient, caregiver, family survey representing patients who received the 4R care pathway plans
- 3) Clinician/Staff cohort surveys: pre and post- surveys of Clinicians/Health Care Stakeholders (physicians, nurses, navigators, social workers, and other staff) from all domains of care;
- 4) Supplemental data for Historical patient cohort and 4R patient cohort from electronic medical records

#### D5a. Project Metrics

Appropriateness and Timeliness of Care (via Patient survey and medical records data) Did patients receive the guideline-recommended care in guestion, and was it received in the appropriate timing and sequence? Metrics include: Goal of care and prognosis discussion held with patient and documented after diagnosis; Distress screening and referral to relevant care after diagnosis; Clinical trial qualification and enrollment; Comorbidity care (e.g. diabetes, asthma, HIV) before and during treatment; Timely imaging and other testing; Neoadjuvant therapy for indicated patients; Palliative and supportive care for indicated patients; Genetic assessment and testing prior to definitive treatment (surgery and/or systemic therapy); and Flu immunization prior to definitive treatment (surgery and/or systemic therapy). Based on institutional challenges, priorities, patient population needs, and the goals of 4R Mercy and Montefiore implementations, additional metrics may be used: Reconstructive surgeon consult in time for surgical strategy decision; Timely surgical consult after neoadjuvant therapy; Timely oncology consult for neoadjuvant patients post-surgery; Onco-fertility consult and care for indicated and interested patients prior to systemic or anti-hormonal therapy; Dental referral, prior to initiation of systemic treatment; and/or Timely survivorship appointment. Patient satisfaction, engagement and self-management (via Patient survey) Did patients find the 4R care plans useful, and did the 4R plans improve patients' selfmanagement ability? Metrics include: Understanding of the overall care plan; Ability to manage and coordinate one's care; Being in control of one's care, and not overwhelmed; Whether the care pathway helped the patient adhere to appointment schedules; and Usability by patients of the 4R pathway/Sequence for intended purposes.

**Clinician's satisfaction and effectiveness with care pathway planning** (via clinician/staff survey). *Is 4R helpful to clinicians' efforts to care, provide and explain multi-modality cancer care plans to patients? Is the 4R care pathway planning process feasible and effective for clinicians?* Metrics include: Satisfaction with the 4R approach in providing car plans to patients and empowering patients; Usability by clinicians of the 4R Sequence for intended purposes;

Ease of 4R administration; and Time required to complete and explain a 4R Sequence to a patient.

Resulting metrics between the historical/pre-4R and 4R patient/post-4R samples will be analyzed using Fisher's exact test. The metrics fall into three categories – percentages, duration of time and counts. Percentages will be analyzed for appropriateness and timeliness of care. Comparisons with an external standard will be done using a chi-square goodness of fit test. Duration of time metrics will be compared between study groups using a Wilcoxon rank sum test. Comparison with an external standard will be done using either a one-sample t-test or a signed rank test. Counts will be compared between study groups using a two-sample z test for a Poisson count variable. Comparisons of counts with an external standard will be done using a one-sample Poisson z-test.

## D5b. Quantify the amount of change expected from this project in terms of your target audience

- 20% Reduction in patient and clinician reported complexity of care;
- 25% improvement in patient and clinician satisfaction with care communication and planning;
- 20% improvement in patient self-efficacy, activation and satisfaction; and
- 15% improvement in timeliness and sequence of key guideline indicated care events.

## D5c. Plan for the project outcomes to be broadly disseminated.

The team will share experience through: web based workshops with safety-net and community cancer programs, presentation to the ECOG-ACRIN Health Equity committee (Drs. Simon and Rapkin are committee members), submission of abstracts and speaking proposals to the NCCN and ASCO annual meetings and symposium. The team will also write a manuscript describing the project in detail and the results

## 6. Detailed Workplan and Deliverables Schedule:

Implementing the quality improvement of helping breast cancer patients, their families/caregivers, and their care team manage guideline indicated care through use of 4R patient care sequences/pathways will occur over a two-year period, as described in the detailed workplan and deliverables schedule. Key deliverables include:

- (1) A report of current state and gaps based on 4R metrics at participating sites
- (2) Implementation of 4R pathway plans for breast cancer patients at participating sites
- (3) Adaptive workshops with Mercy and Montefiore during project and a dissemination workshop with safety-net breast cancer treatment sites near the end of the project.
- (4) Report of quality improvement implementation results, as compared with baseline data. The detailed workplan and deliverables schedule describes the detailed tasks, timing and deliverables for this project.

#### Detailed Workplan and Deliverables Schedule Table

Activity / task		Yea	ar 1 Year 2			Deliverable			
	Q	Q	Q	Q	Q	Q	Q	Q	
	1	2	3	4	1	2	3	4	
Project startup									Project kicked off, protocol for surveys
									submitted to scientific review committees,
									protocol submitted to IRBs. Expected that
									protocol will be determined "quality
									improvement, program evaluation" and not
									human subjects research.
1) Conduct current state and gan	ana	lvcia	of	bre	act	<u>(</u> 2)			re delivery at participating sites
1) Conduct current state and gap	ana	19513	5 01	bie	ası	Lai	icei	Cai	re denvery at participating sites
a) Conduct survey of									Completed and analyzed current state / gap
patients, family and									patient, family, caregiver surveys
caregivers at									
participating sites									
b) Conduct survey of									Completed and analyzed current state / gap
clinicians / staff at									provider surveys
participating sites									
<li>c) Collect data using pre-</li>									Chart abstraction tool developed and data
developed 4R metrics of									collected.
care delivery									
d) Develop baseline									Baseline data analyzed and measures
measures									developed
2. Educate/ Inform participating sites on 4R methods, collaboratively develop 4R implementation plans									
a) Conduct adaptive									Workshop completed with active participation
a) Conduct adaptive									from providers including adjustments to AP
current state and gap									implementation approach as determined in
analysis workshon with									workshop
clinicians at Mercy and									workshop.
Montefiore									
b) Design 4R-Care-	1								Completed care plan templates, from point of
Sequences and									care initiation with patient personalization:
templates for all points									histology, biomarkers, patient/ family history,
in the breast cancer care									co-morbidities, patient's life stage, patient's
pathway (Early and									personal needs & choices. Utilization of
Advanced breast cancer)									project management principles, with timing,
									sequencing, dependencies, roles /

Activity / task			Yea	ear 1 Year 2			Deliverable			
		Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	
										responsibilities, checkpoints
c) Conduct adaptive focused o impleme clinicians and Mon including training	second workshop on 4R ntation with / staff at Mercy tefiore operational									Completed implementation ramp-up and operational training, and adjustments to 4R care sequences and templates as determined in workshop.
3. Implement br	east cancer 4R path	hwa	ay p	lan	S					
a) Implement plans with t patients (ra first month implementa	4R pathway preast cancer mp up over of ation)									Provide 4R care plans to breast cancer patients at Mercy and Montefiore
b) Follow the 4 patient	4R plan for each									Revised 4R care plans for each patient as their individual needs, wishes, and/or prognosis changes.
<ul> <li>c) Conduct 3<sup>rd</sup> workshop w clinicians/st</li> <li>4R impleme challenges w adjust/adap each challer</li> </ul>	adaptive vith aff focused on entation with a focus to ot to address nge.									Workshop completed with active participation from providers, including adjustments to 4R care plans and approach as determined in workshop.
d) Conduct sur patients, far caregivers 3 treatment	rvey of milies and 8 months into									Completed 4R patient surveys
e) Conduct sur clinicians/st implementa	rvey of aff after 4R ation									Completed 4R provider surveys
f) Obtain and implementa collecting se tabulating c	analyze post- ation data (start equencing, lata during									Data collected from 4R plans and using chart abstraction tool developed in 1c

Activity / task		Year 1				Yea	ar 2		Deliverable
	Q	Q	Q	Q	Q	Q	Q	Q	
	1	2	3	4	1	2	3	4	
	implementation)								
g)	Analyze post-4R surveys								Comparison of baseline data to
	and data with baseline								
	surveys and data								
4. Disseminate results and the 4R methodology for care pathway delivery improvement									
a)	Conduct 4th adaptive								Documented lessons learned and detailed
	workshop with								dissemination plans
	clinicians/staff focused on								
	lessons learned from 4R								
	implementation and to								
	develop dissemination								
	plan.								
b)	Develop a summary report								Summary report of results and findings
	of results and findings								
c)	Submit abstract and/or								Completed abstract/manuscript
	manuscript for peer review								
d)	Conduct workshop for								Conduct of workshop for breast cancer
	safety-net breast cancer								treatment sites sharing experience and tools
	treatment sites to share								from 4R implementation
	findings from								
	implementation and tools								
	developed	_							
e)	Complete other								Complete dissemination plan activities
	dissemination activities								
	identified by clinician/staff								
	workshop								

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