Equity in Action: Developing Infrastructure for Sustainable Models

Models of Care Delivery in Rural Patient Populations

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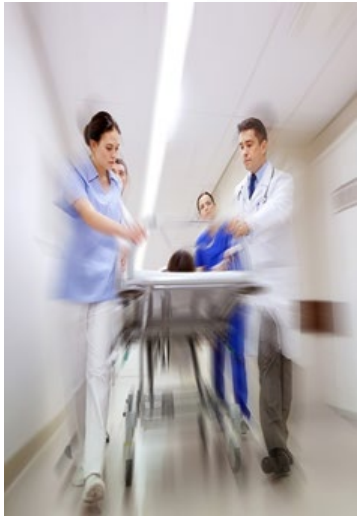
Disclosures

- Consultant to Reimagine Care

Landscape for the Delivery of Cancer Symptom Management since 2013

- Symptoms and adverse events remain a significant feature of treatment and advanced disease
- Fragmented symptom care
- Limited or no EHR inclusion
- Current model: Patient self-management education
- Current model: Clinic visit, ED and unplanned hospitalization for urgent care- not proactive
- A bricks and mortar structure



- Technology advances
- Value of patient-reported outcomes (PROs)
  - Basch, 2016,2017; Mooney 2017
- Covid-19 Pandemic
- New models of care
  - Remote monitoring
  - Hospital at Home
  - Virtual care
  - Chemo at home

Overlay the Current Care Model with Distance from Cancer Care

Distance as a Disparity

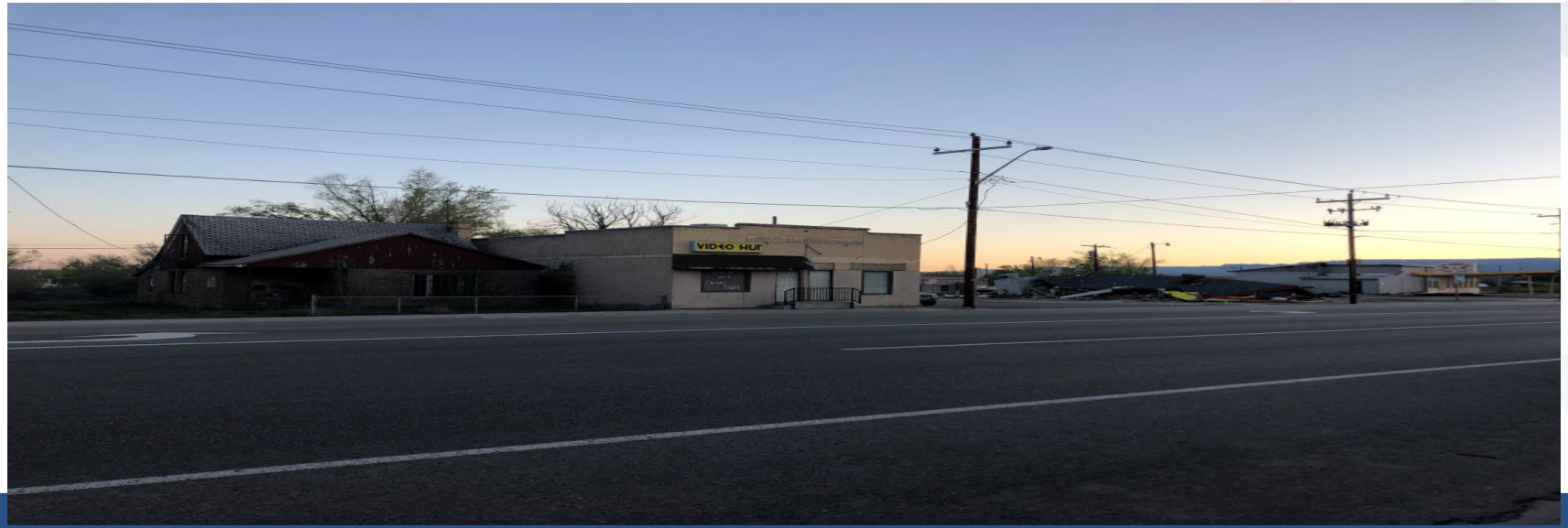
- Living outside of a metropolitan area Rural <100/sq. mi; Frontier <7/sq. mi
- Rural patients-higher cancer mortality rates; less likely to receive standard of care (Levit, 2020)
- Utah rural patients- 5-year relative survival 5.2% lower than urban and a 10% increase in risk of death (HR = 1.10, 95% CI = 1.03, 1.18). More likely higher stage, older patients (Hashibe, 2018)

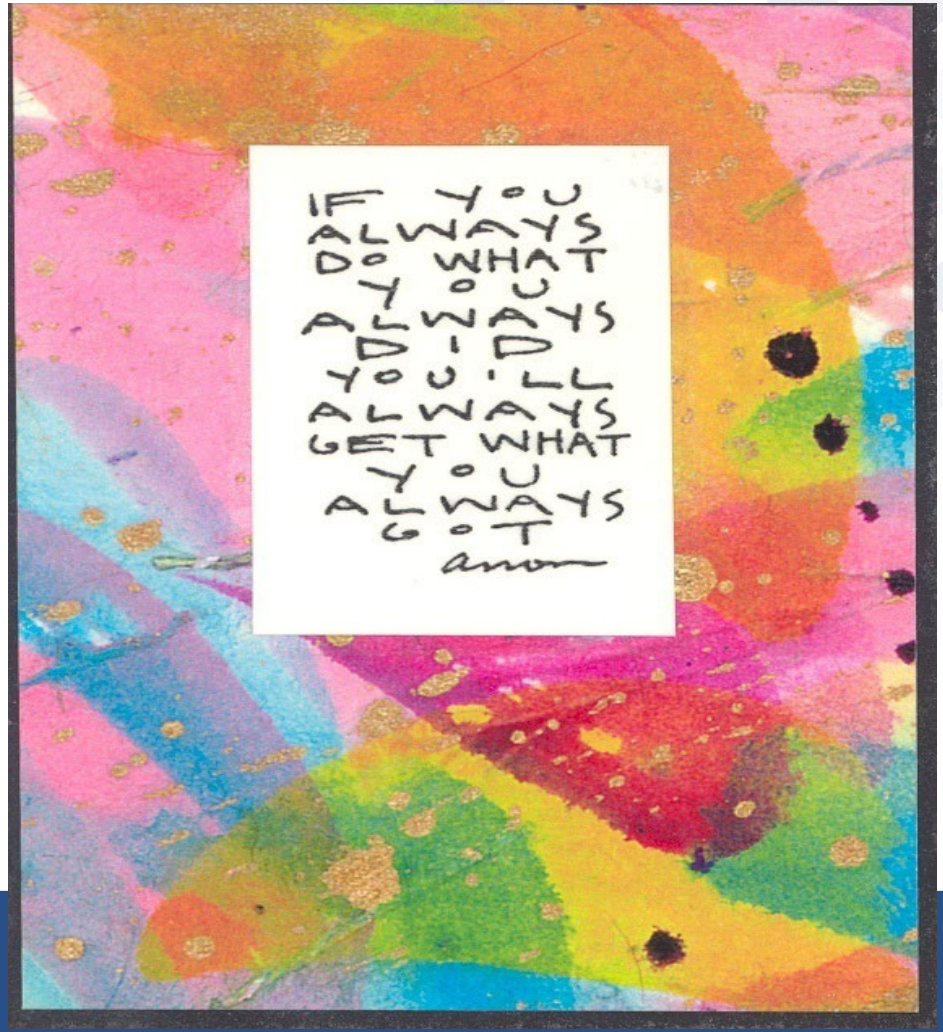
Distance Disparities

- Limited or no access to oncology services without travel: screening, diagnosis, treatment, clinical trials, supportive care, survivorship care
- Travel (while unwell)
- Transportation costs
- Lodging and food costs
- Lost wages, added financial burden
- Limit treatment options to fit travel demands and added costs

- Demands on family caregivers
- Uncertain about how to evaluate symptoms- seek local care or travel to cancer services
- Self-management challenges for complex care, health literacy
- Lack of coordination and communication between local providers and cancer providers; incompatible EHRs

Is this a Patient-Centric Model of Care Delivery; Does it Provide Equitable Access to Care?

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Paradigm Changing Models of Care Delivery

Bringing Cancer Care Home

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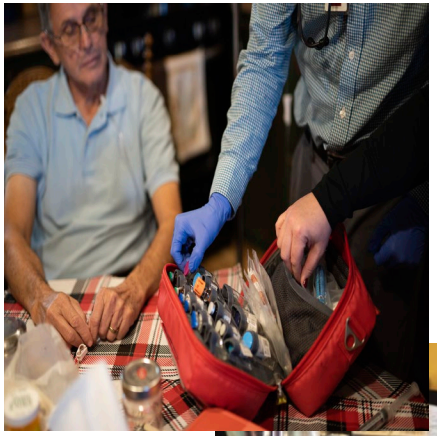
Home-Based Model for Cancer Care



Need for a unique oncology home-based model of care to address treatment side effects and symptoms of disease progression

- **Acute episode care** that would otherwise require ED and/or hospitalization
- **Subacute monitoring and care** to address early, symptom exacerbations and to prevent acute episodes all together (not found in standard hospital at home models)

Huntsman at Home

Began August 2018

Program Description

Titchener et al. *NEJM Catalyst* 2021 2(11)


original reports

Evaluation of Oncology Hospital at Home: Unplanned Health Care Utilization and Costs in the Huntsman at Home Real-World Trial

abstract

ASCO

Journal of Clinical Oncology

Outcomes Evaluation

Mooney et al. JCO 2021 39(23):2586-2593

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Acute

- Hospital at Home model
- 3-7 day acute home-based care rather than hospitalization
- Common reasons:
  - Poorly controlled pain
  - Dehydration; electrolyte imbalance
  - Failure to thrive, frailty, falls
  - Neutropenic fever; infection
  - Acute hypoxia
  - Partial bowel obstruction

(Titchener, 2021)

Subacute

- Technology based PRO monitoring and management
- Symptom Care at Home (SCH)-monitoring, automated coaching and NP follow-up
- Chemotherapy Patients with SCH monitoring: 67% less severe symptom days, 40% less moderate symptom days, 60% more mild symptom days, 25% more asymptomatic days than usual care
- Hospice Caregiver: 38% reduction in patient end-of-life symptoms; 35% improvement in Caregiver Mood and 31% improvement in Vitality than usual hospice care

(Mooney, 2017; 2023)

Huntsman at Home's Health Care Utilization Outcomes in the 30 Days after Enrollment

169 H@H pts compared to 198 usual care pts

Health Care Use; Cost	Estimate	p-value
Unplanned Hospitalizations Odds Ratio % Reduction	0.45 55%	<0.001*
Unplanned Hospital LOS	1.13 days	0.004*
ICU Stays Odds Ratio	0.99	0.972
ED Visits Odds Ratio % Reduction	0.55 45%	0.022*
% Reduction in Charges	47%	0.001*

Mooney et al. *J Clin Oncol* 2021; Aug 10; 39(23):2586-2593

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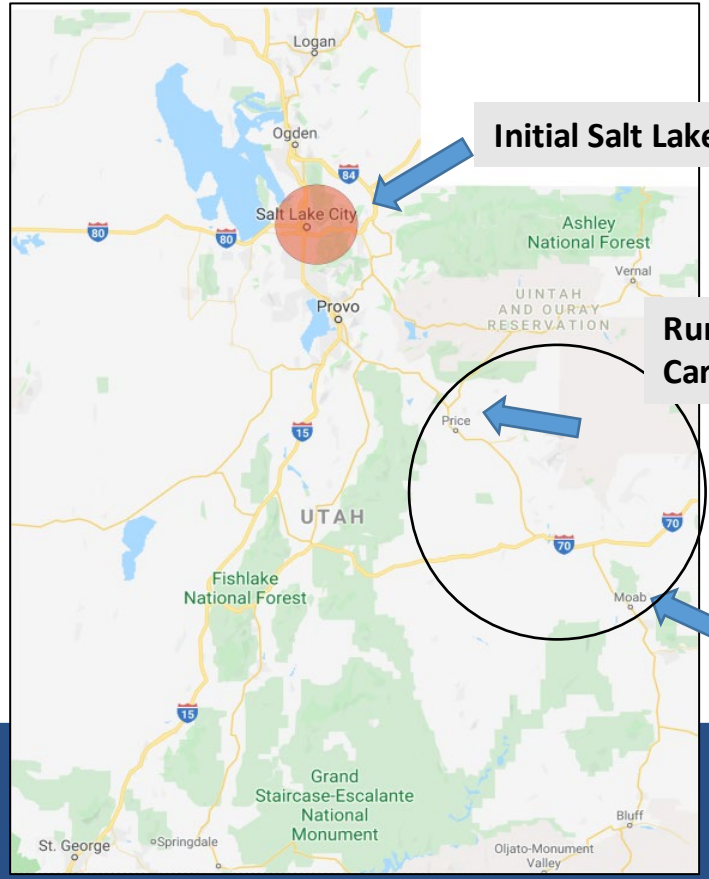
Huntsman at Home Rural Model to Address Distance as a Disparity



Initial Salt Lake valley; 20 mile radius of Huntsman

Rural Program
Carbon, Emery and Grand Counties

- Population-based model
- NP, nurse navigator, home health RNs, PT, SW, Paramedics
- Scalability-rural virtual care center

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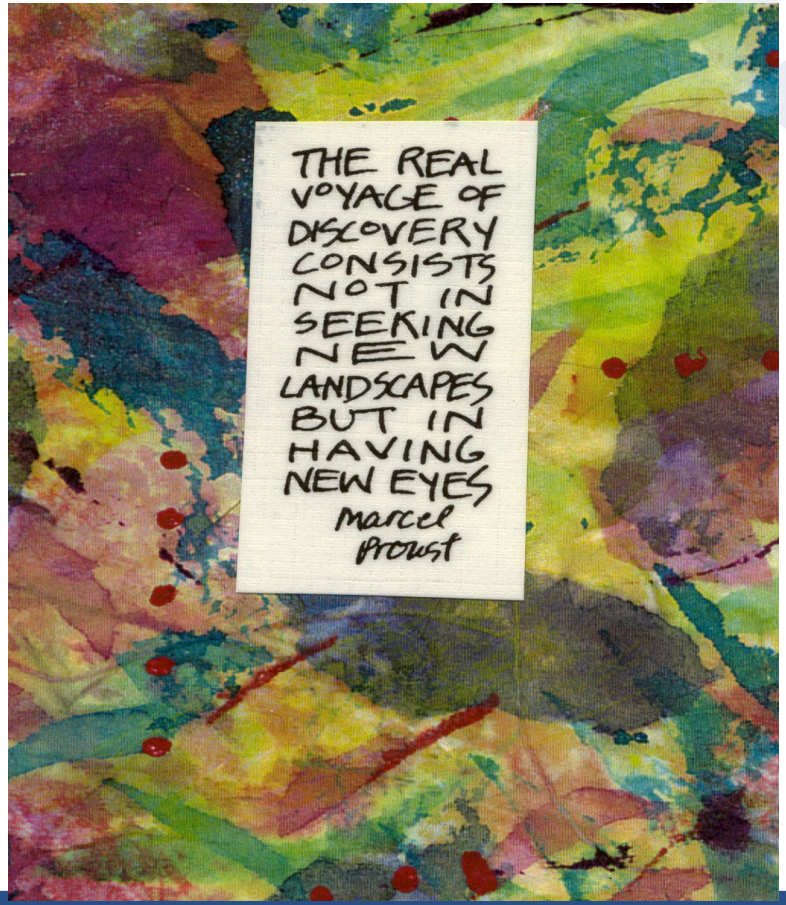
Addressing Geographic Access and Inequity

- 2 - 5 hour drive one way from Huntsman including a high mountain pass
- The 3 rural/frontier counties; 9,641 sq.. mi
- Combined population 40,220
- No oncologist in the 3 counties
- Two safety net hospitals, 27 and 17 beds
- Significant health disparities
  - 49% Health literacy
  - 45% Transportation burden
  - 30% Patient & family financial toxicity
  - 15% Food insecurity

Challenge: the lift from a brick and mortar model of inpatient and outpatient cancer services to one that embraces home as a key site of care and a commitment to address distance as a disparity

- Restructuring mindset, oncology cultural change, champions
- Becoming patient-centric
- Utilizing technology
- Investing in new infrastructure
- Changing restrictive regulations; adding enabling policies
- Embracing new payment models
- Emphasizing pragmatic trials and implementation science



Our challenge is to disrupt current approaches to cancer care delivery

By Having New Eyes