Indiana University Health

Care Delivery Improvement in Complex Organizational Environments

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Indiana University Health

- **Location:** Indiana
- **Facilities:** 20 hospitals
- **Beds:** 3,541
- **Network size:** 1,600
- **Total Patient Revenue:** $4.4B

Alternative Payment Models & Payer Partnerships:

- Provider-Sponsored Health Plan

IU Health Working Definition of Population Health

The management and co-ordination of medical care delivery to a defined population to improve clinical outcomes at a lower cost of care

IU Health Population Health Patient Care Delivery Model

PEOPLE

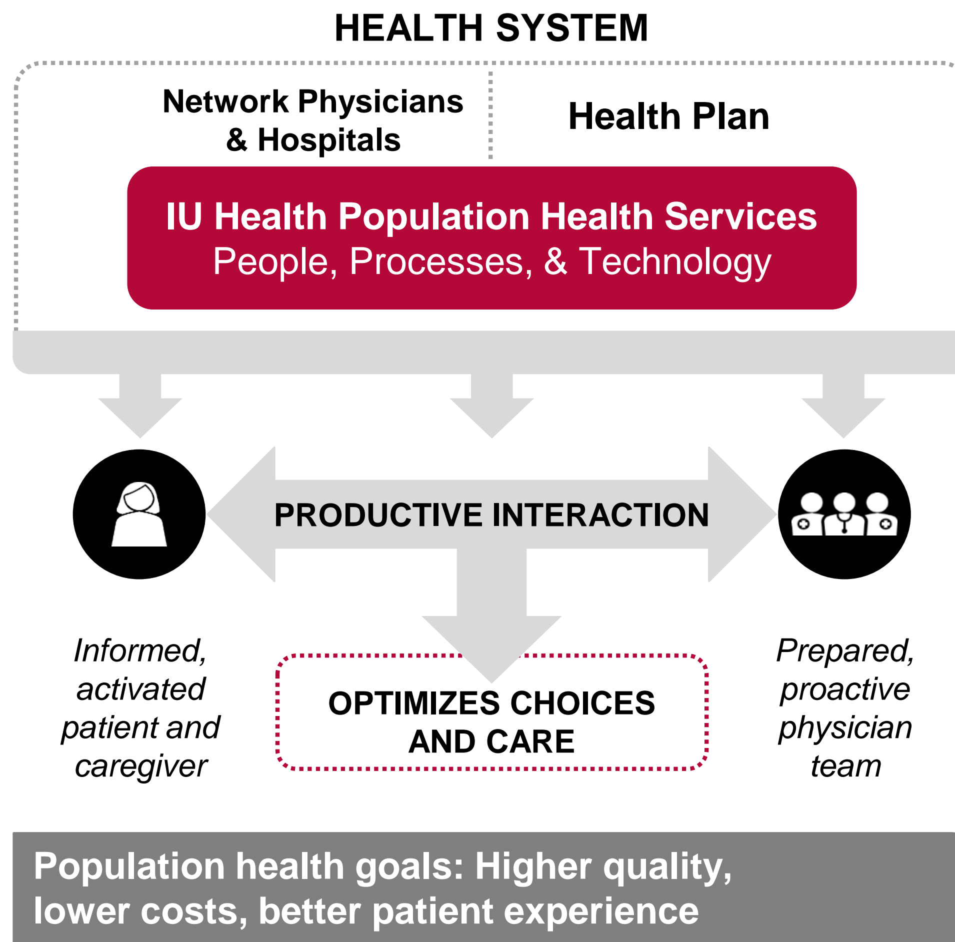
- Extended Care Team to support patients, their families, care givers, and physicians/providers

PROCESSES

- Best practice processes to deliver a model of care that achieves desired results statewide

TECHNOLOGY

- Technology to identify & manage the right patients to receive care tailored to their needs

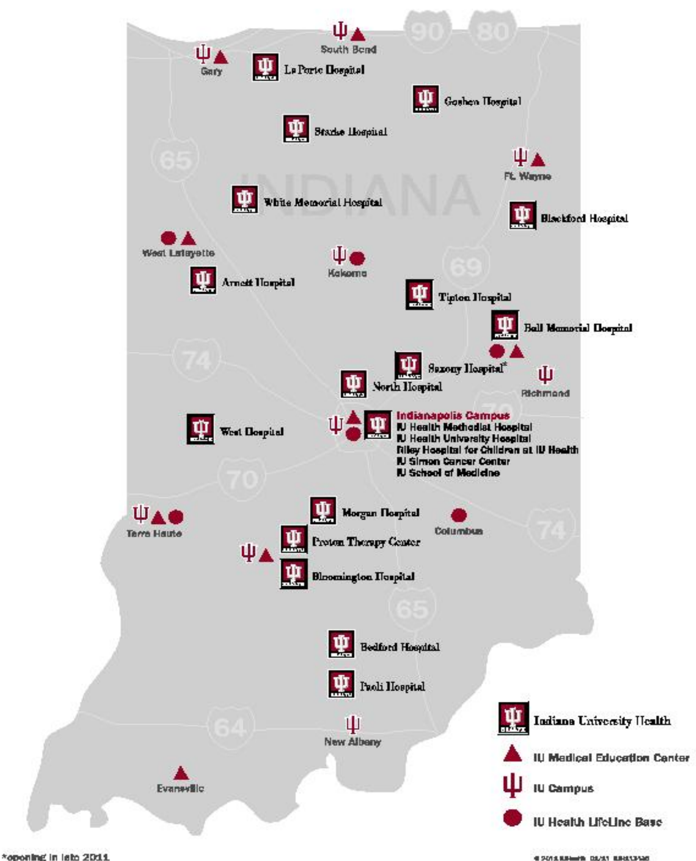


Population Health Service Line Managed Populations

"Doing the right thing, for the right patient, at the right time, in the right care setting, to improve the health of one and the many."

2016 Risk Populations = 190K lives

- IU Health Plans 91K
  - Medicare Advantage 16.5K
  - Employees 41K
  - Commercial 14K
  - Exchange 24K
- MDwise 87K
  - Exchange 25K
  - Medicaid Adults HIP 18.5K
  - Medicaid Kids HHW 43.5K
- Future risk, ACO, or P4P contracted lives will be managed in the Population Health Model



Organizational Core Competencies

- 1. Risk Identification and Stratification
- 2. Customized and Tailored Interventions
- 3. Focus on Prevention
- 4. Primary Care Redesign
- 5. Care Management Across the Continuum
- 6. Engaged and Activated Providers

Tailored Outpatient Care Mgmt Process

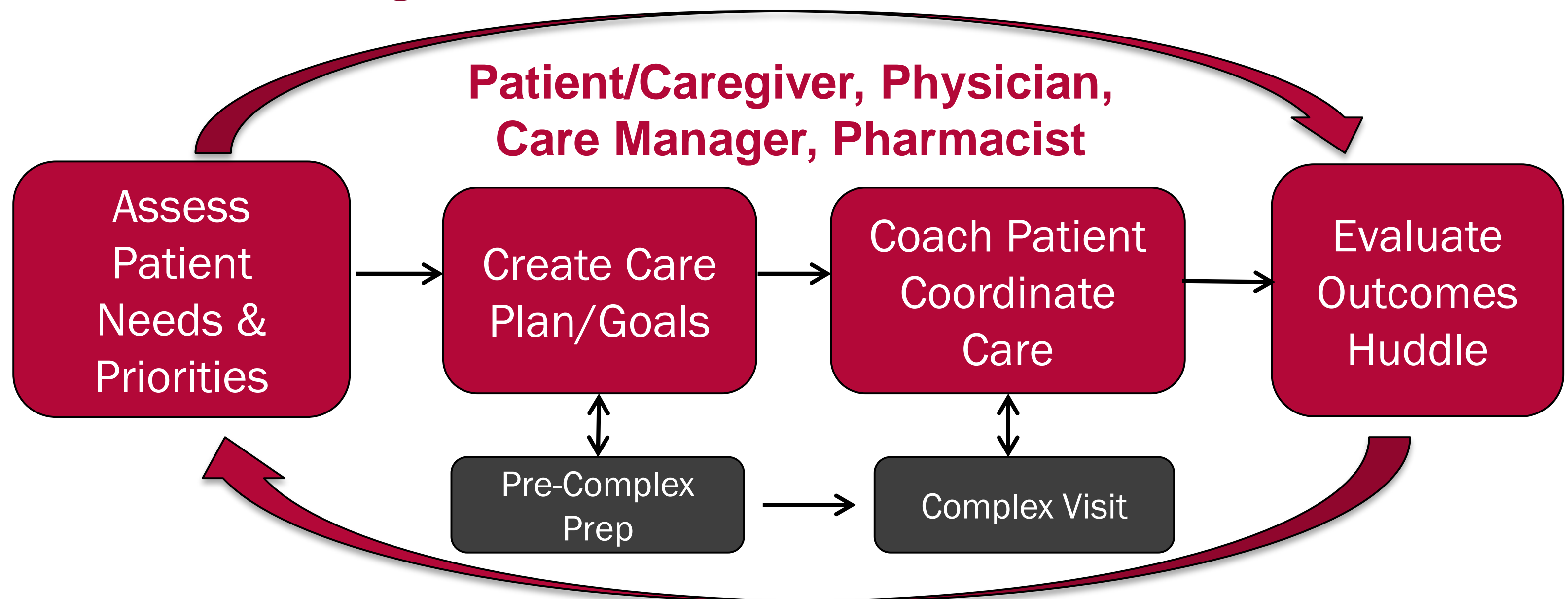
1. Patient Identification Process:

Risk stratification, Roster review → Generates patient lists →

2. Patient Engagement Process:

Patient Outreach by Care Mgr &/or Practice

3. Care Management Process: High, Med, Low risk programs



Complex Care Program Activity

Jan.-Dec. 2015

Complex Care Program Metric (All lines of business)	
Number of Patients Reached[1]	1833
Number of Patients Engaged[2]	962
Engagement Rate	52%
Number of Complex Care Visits Conducted	1309

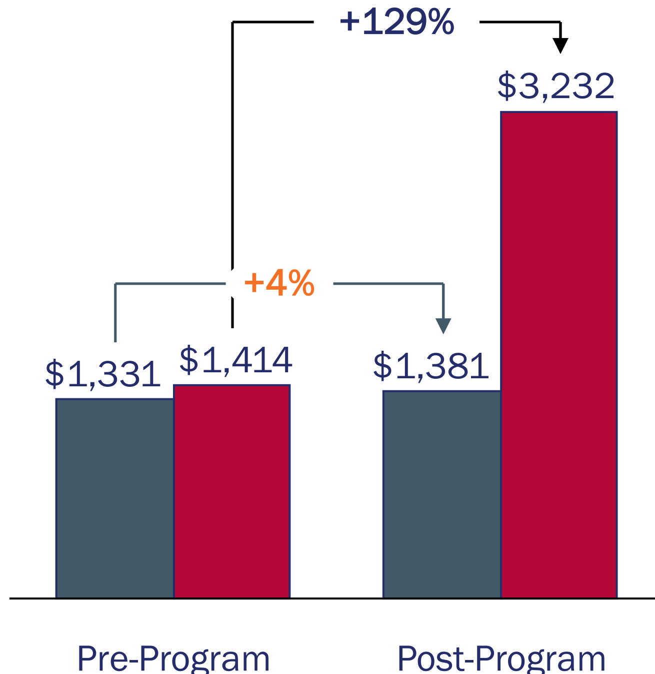
[1]Number of patients after excluding those who were considered ineligible for engagement or outreach (deceased, unable to reach, etc.)

[2]Engaged is defined as having successfully completed at least one assessment among program statuses of: Case Assigned, Declined to Participate, Engaged, Enrolled, Problems Resolved/Goals Met, and Outreach in Progress (as of 12/31/2015)
NOTE: This engagement rate is comprehensive of both remote and embedded care delivery models.

Complex Care program is achieving 50% cost avoidance for a Medicare population

Cost Avoidance in Total Spend (PMPM) of Matched Complex Care Managed Cases and Controls

Partner *Medicare Advantage* population



Matched case-control study cohort size:

= 95 managed = 95 controls

Results

(Select Primary and Secondary Outcome Metrics)

Outcome	Managed	Controls	p-value
Total Spend	**$1,381**	**$3,232**	**<0.001**
Total IP Admissions	666	2,030	<0.001
Acute IP Admissions	543	1,393	<0.001
Acute IP Days	2,505	7,861	<0.001
Sub-Acute IP Admits	123	637	<0.001
Sub-Acute IP Days	2,820	19,741	<0.001
ED Visits	806	1,214	0.14
PCP Visits	6,254	5,891	0.56
Specialist Visits	6,096	7,144	0.26

Note: Spend in PMPM, utilization in units/1,000

Estimated annual cost avoidance of ~$4M on ~10k MA population

Notes:

- Complex Care cases created 4/1/14 – 8/20/14
- Baseline period = 12 months prior to case create date (or anchor date)
- Study period = case create date (or anchor date) to 11/20/14; average member months in outcomes period 7.2 and 6.3 for managed and controls respectively, utilization and spend metrics are normalized by member months accordingly
- Study period based on claims incurred thru 11/20/14, paid thru 2/9/15
- Results are preliminary and are not indicative of long-term impact of the program on total cost of care. Results will be refreshed periodically with larger sample sizes and longer program engagement to ensure validity of results.
- Projected annualized cost avoidance is based on extrapolating observed impact to 50% of the entire complex care cohort using current identification and engagement rates

Tailored Transition Program Process

- Pt identified as High Risk Discharge by stratification criteria or Physician's choice

- Transitions Care Team works with Patient & Family
- Home visit recommended & scheduled
- Hospitalist to PCP communication

- Home visit 2 days post-D/C
- Post-D/C transitions plan
- Communication w/PCP-EMR
- Medications reconciled

- Telephonic follow-up weekly at minimum or as needed for 30 days
- Communication w/ PCP via EMR

- Follow up Office Visit
- Handoff to PCP

Hospital → Home → Stable Health

Transition Care Program Activity

Jan.-Dec. 2015

Transition Care Program Metric	
Number of Patients Reached[1]	2635
Number of Patients Engaged[2]	1670
Engagement Rate	72%
Number of Home Visits Conducted	974

[1]Number of patients reached, after excluding those who were identified but considered ineligible for engagement or outreach (deceased, unable to reach, etc.)

[2]Engaged is defined as having successfully completed at least one assessment among program statuses of: Case Assigned, Declined to Participate, Engaged, Enrolled, Problems Resolved/Goals Met, and Outreach in Progress (as of 12/31/2015)

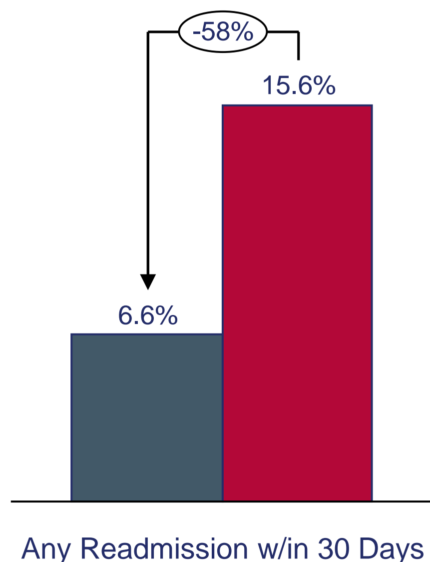
Transition Care Program Evaluation:

Results of propensity score matched case-control study

30-day Readmission Rates*

Managed vs. Controls (p<0.05)

IUH *Medicare Advantage* Population



Any Readmission w/in 30 Days

Matched case-control study cohort size:

= 122 managed (graduated or transferred)
= 122 controls

Secondary and Tertiary Outcomes*

Managed vs. Controls

Outcome Indicators		Managed	Control	P-value
Cohort size		122	122	
Secondary Outcomes				
Average length of stay of 30 day readmissions (days)		4.1	8.5	<0.05
Average spend of 30 day readmissions ($)		$5,410	$55,886	<0.01
Readmission within 60 days (%)		9.8%	22.1%	<0.05
Average length of stay of 60 day readmissions (days)		3.9	7.6	<0.05
Average spend of 60 day readmissions ($)		$7,269	$41,986	<0.01
Tertiary Outcomes				
ED visit within 30 days (%)	▼	9.0%	13.1%	0.31
ED visit within 60 days (%)	▼	15.6%	21.3%	0.25
PCP visit within 5 business days (%)	▲	35.2%	29.5%	0.34
PCP visit within 10 business days (%)	▲	54.1%	44.3%	0.13
PCP or specialist visit within 10 business days (%)		72.1%	54.9%	<0.05
Readmission within 30 days ACSC-related (%)	▼	2.5%	4.9%	0.31
Readmission within 60 days ACSC-related (%)	▼	4.1%	9.0%	0.12

Notes:
- Transition Care cases created 5/1/14 – 1/31/15
- Baseline period for clinical and utilization profile = 12 months prior to index stay associated with a Transition Care case
- Study period = index discharge date to 60 days post-discharge
- Acute IP discharges based on claims incurred thru Mar 2015, paid thru Jun 2015. Exclusions applied for discharges for death, those with a principle diagnosis of pregnancy, or those with a condition originating in the perinatal period.
- Cases and controls were matched on demographics, socioeconomic status, health risk (i.e., CCI), inpatient case mix, 12 month prior healthcare use and spend using a propensity score model.
- Results are preliminary and are not indicative of long-term impact of the program on total cost of care. Results will be refreshed periodically with larger sample sizes and longer program engagement to ensure validity of results.