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Getting Administrative Buy-In Using Data

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Goals of session

- How to collect and interpret data on
  - your adult SCD patients' health services utilization.
  - the impact of your patients' utilization patterns upon institutional finances.
- Strategies to engage your institution in supporting your program.

YNHH's Story

- Yale University School of Medicine
- 1,541-bed Academic Medical Center in urban New Haven, CT
- Flagship for 5-hospital health system.

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2010: Clinical Point of View

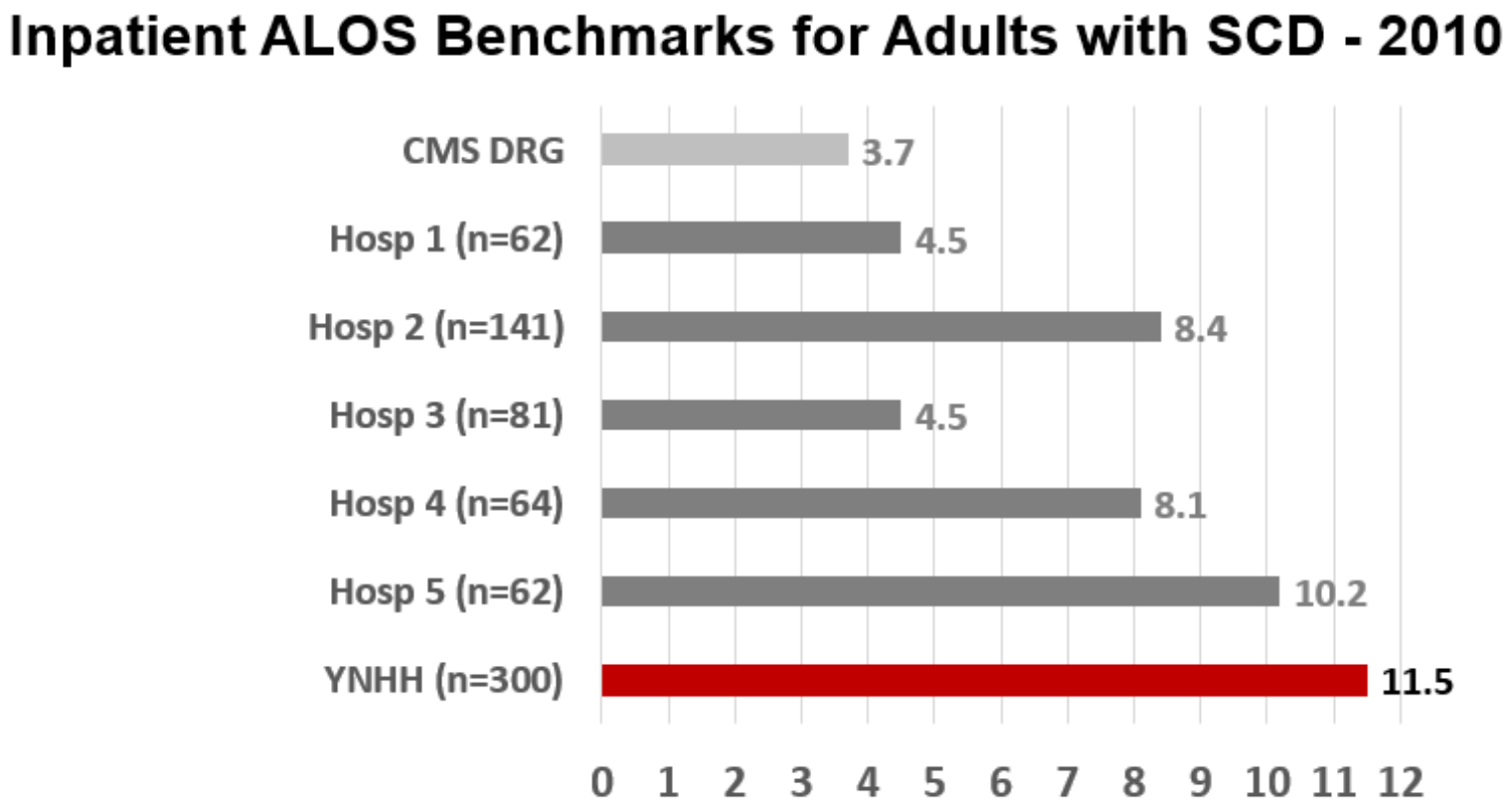
Chaos on the Floors

- Inconsistent MD attitudes/approaches towards pain management
- IV morphine/Dilaudid by push, scheduled and PRN
- Frequent, prolonged hospital stays

and in the Clinic

- Infrequent arrived clinic visits

Finance Point of View



Connecticut Hospitals with > 60 adult inpatient discharges in FY 2010

Data Source: Connecticut Hospital Association CHIMEData

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Adult SCD Program Business Plan

- **Invest**
  - Medical Director
  - Inpatient and Outpatient APRNs
  - Inpatient Social Worker to augment existing Outpatient Social Worker
  - Psychiatrist embedded in clinic; inpatient Behavioral Intervention Team (BIT)
- **Goal: reduce inpatient ALOS from 11.5 to 7.5**
  - Reduce Direct Costs
  - Increase Contribution Margin
  - Increase Operating Margin

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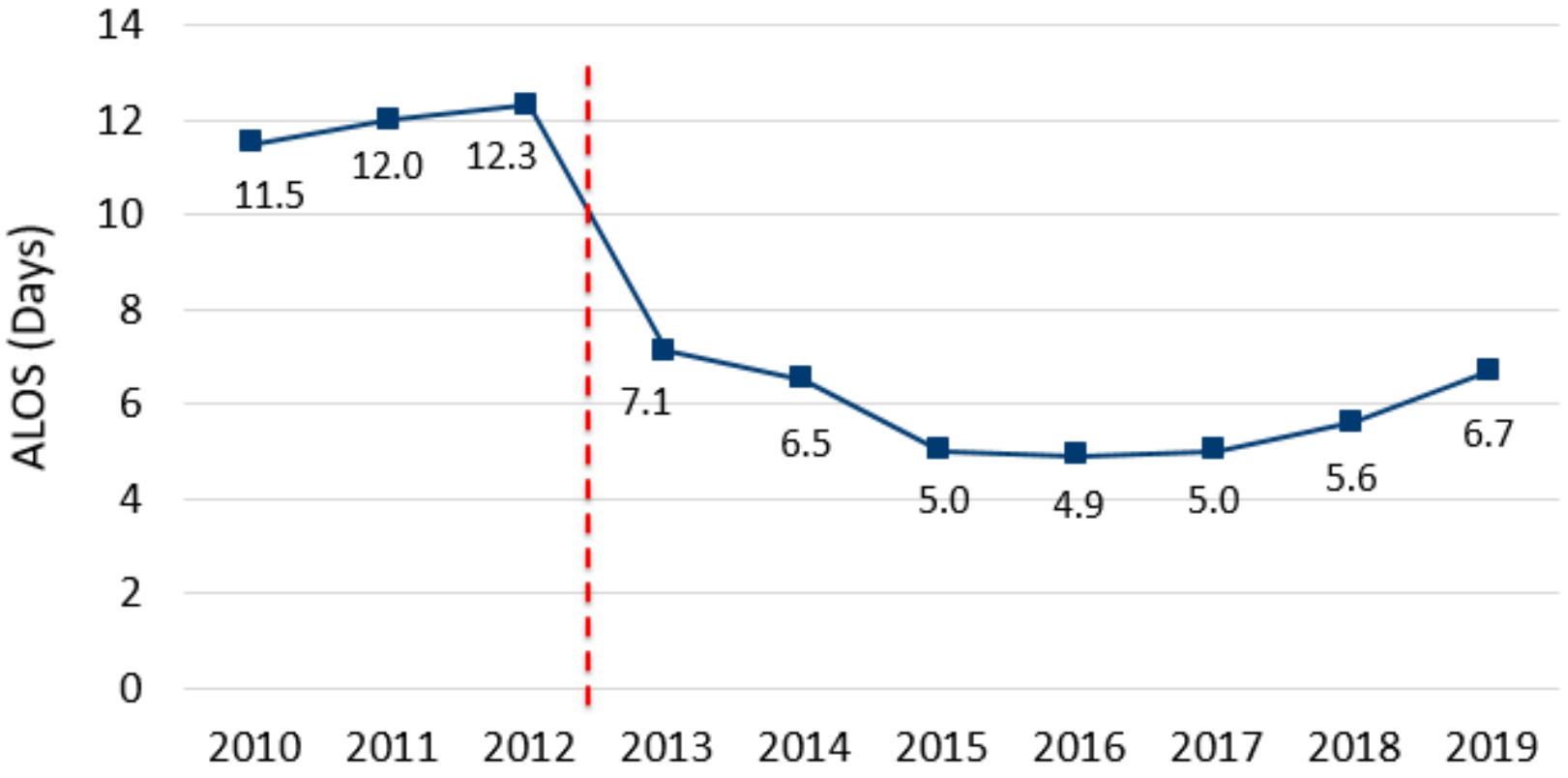
Program Outcomes – Finance View: Inpatient ALOS Reduction



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Clinically Relevant Data

- **Patients**
- **Utilization**
  - ED
  - Hospital
  - Clinic
  - Infusion Center

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Population Definition for Data Capture

- Principal Diagnosis of SCD vs. Principal *or* Secondary Diagnosis of SCD?
- Age: Adult? Pedi?
  - Adult: Age 18+? Age 21+?
- Sites of Service
  - Selected Campus/ Department?
  - Inpatient: Selected Nursing Unit(s)?
  - Outpatient: ED, Observation, Clinic, Other
- Other Considerations
  - Validate SCD diagnosis through additional criteria? *

* Michalik et al, Identification and Validation of a Sickle Cell Disease Cohort within Electronic Health Records, Academic Pediatrics, 2017;17:283-287

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ICD-10 diagnosis codes for Sickle Cell Disease

D57.00 - Hb-SS disease with crisis, unspecified
D57.01 - Hb-SS disease with acute chest syndrome
D57.02 - Hb-SS disease with splenic sequestration
D57.1 - Sickle-cell disease without crisis
D57.20 - Sickle-cell/Hb-C disease without crisis
D57.211 - Sickle-cell/Hb-C disease with acute chest syndrome
D57.212 - Sickle-cell/Hb-C disease with splenic sequestration
D57.219 - Sickle-cell/Hb-C disease with crisis, unspecified
D57.40 - Sickle-cell thalassemia without crisis
D57.411 - Sickle-cell thalassemia with acute chest syndrome
D57.412 - Sickle-cell thalassemia with splenic sequestration
D57.419 - Sickle-cell thalassemia with crisis, unspecified
D57.80 - Other sickle-cell disorders without crisis
D57.811 - Other sickle-cell disorders with acute chest syndrome
D57.812 - Other sickle-cell disorders with splenic sequestration
D57.819 - Other sickle-cell disorders with crisis, unspecified

Exclude: D57.3, Sickle Cell Trait

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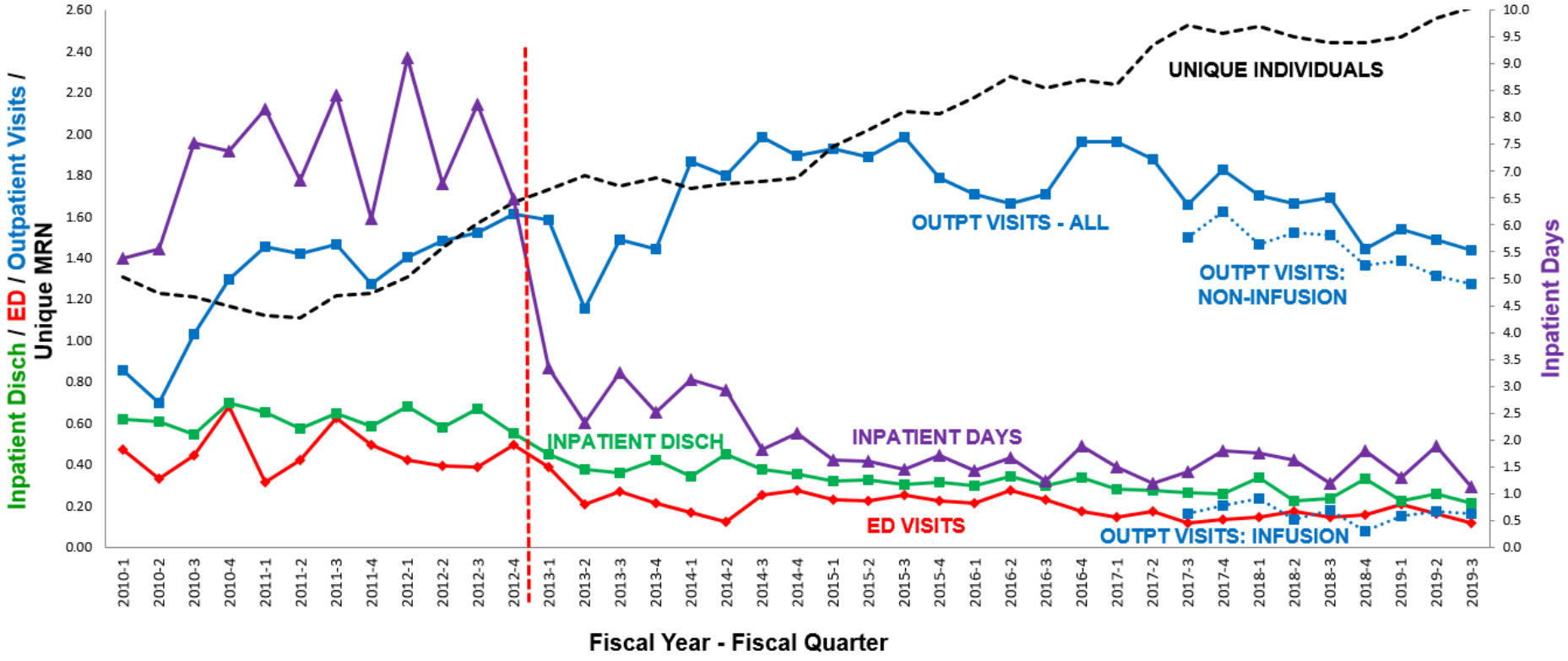
Program Outcomes: Clinical/ Operational View



Visit volumes adjusted for number of unique individuals.

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Financial outcomes of re-organization

?

Billing & Reimbursement

Your program likely has two billing entities:

- Hospital (facility fees).
- Physicians and APPs - professional fees (“pro fees”), based upon RVUs generated by billing E&M CPT codes.

- Telemedicine may generate professional fee only.

MD and APP Billing & Reimbursement

- Difficult to support a medical director's effort on pro fees.
- Consider the feasibility of the Hospital (or practice plan or school of medicine) supporting the medical director's effort.

Hospital Billing & Reimbursement

Two types of payment arrangements:

- **Fee for service**
  - Contract based.
  - Reimbursement based on **negotiated** payments.
  - Usually commercial insurance.
  - Revenue usually > Hospital Costs.
- **Case based reimbursement**
  - Reimbursement based on **fixed** payments (APCs / DRGs).
  - MCaid/ MCare plus a growing number of commercial payors.
  - For MCaid/ MCare, revenue usually < Hospital Costs.

Hospital Financial Data: Charges, Costs and Revenue

with examples from one patient visit

Charge:
Sticker price.
Source: Chargemaster

$30,992

Cost:
Cost to the Provider
"Direct" vs. "Indirect"
Source: Cost Accounting

$15,098

Net Revenue:
Expected payment.
Source: Contracts; MCare & MCaid Payment rates.

$17,488

Summary Payments:
Actual payment.

$0

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Important Financial Calculations

- **Contribution Margin ("CM"):**
  Net Revenue minus Direct Cost
- **Operating Margin ("OM"):**
  Net Revenue minus Total Cost

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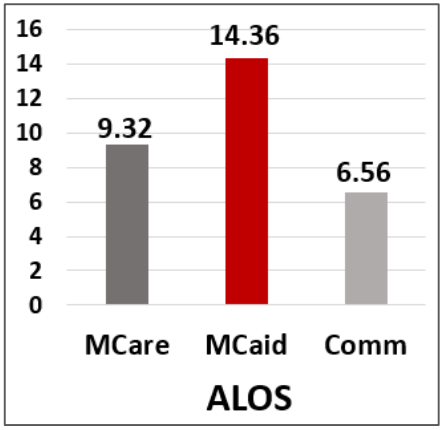
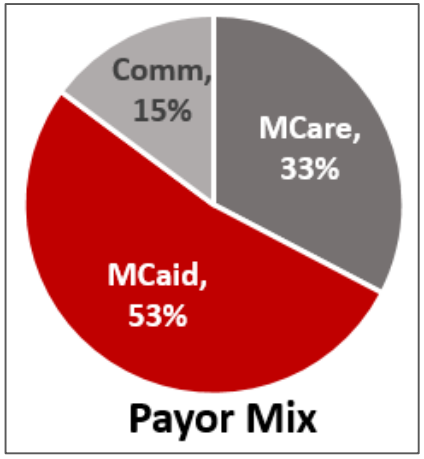
YNHH - FY 2010 Statement of Revenue and Expenses Inpatient Discharges

	Governmental *(case-based revenue)*		Non-Governmental Commercial *(contracted revenue)*	Total
	Medicare	Medicaid		
Cases	85	134	39	258
Patient Days	792	1,924	256	2,972
Net Revenue	$690,646	$1,449,943	$1,059,776	$3,200,365
Direct Costs	**$585,287**	**$1,270,432**	**$295,258**	**$2,150,977**
Indirect Costs	$721,607	$1,597,441	$324,334	$2,643,382
Contribution Margin	**$105,359**	**$179,511**	**$764,518**	**$1,049,388**
Gain / (Loss)	**($616,248)**	**($1,417,930)**	**$440,184**	**($1,593,994)**





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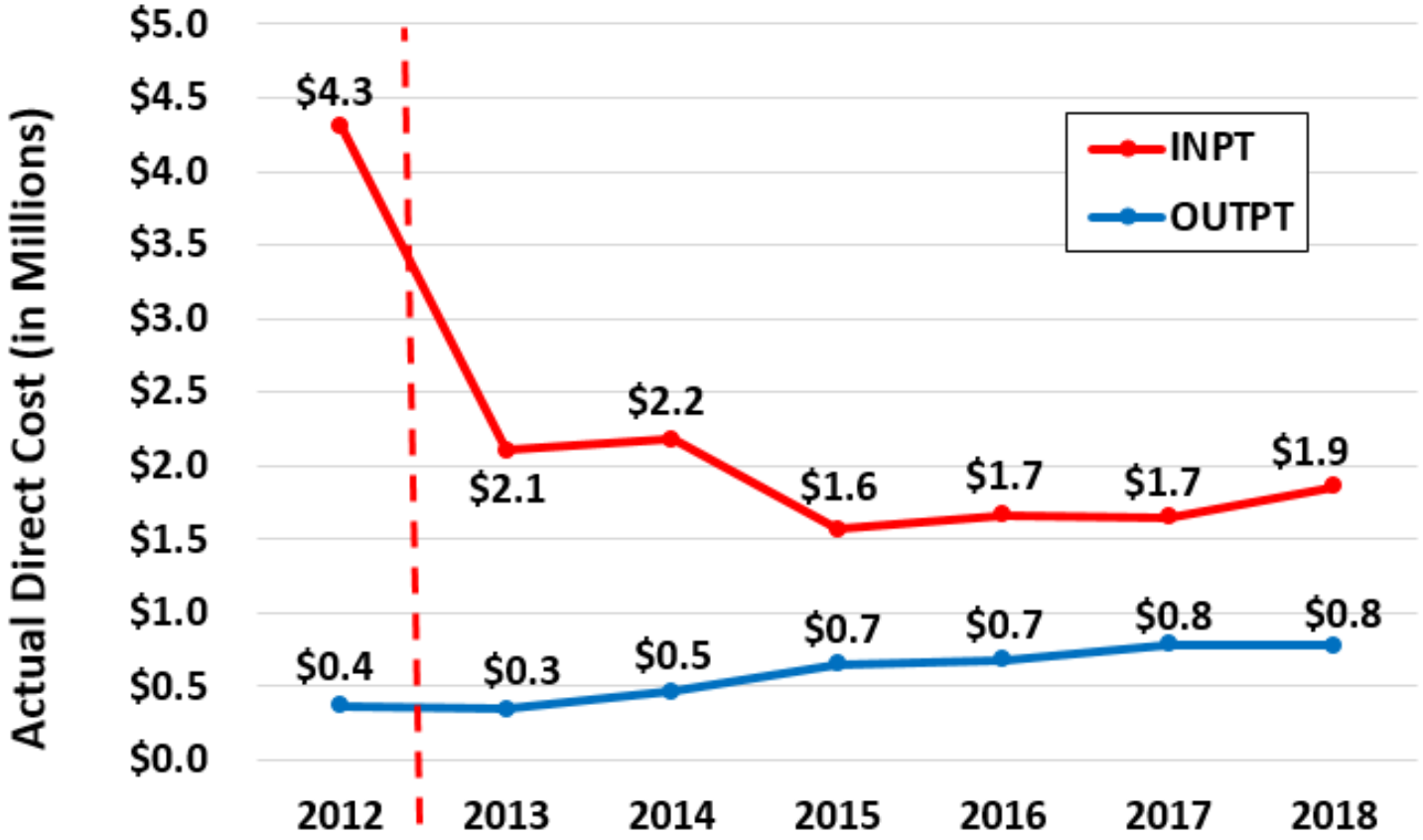
Inpatient-Outpatient Direct Cost Changes



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Financial Success – Cost Reduction

Cumulative Savings over 6 years, FY 2013-2018*:

- **Inpatient** direct cost **decrease**: **$14.8M**
- **Outpatient** direct cost **increase**: **$1.8M**
- Total **Inpatient and Outpatient:**

$13.0M in cumulative savings

*Sum of costs for each year, 2013 to 2018, minus cost of baseline year, 2012.

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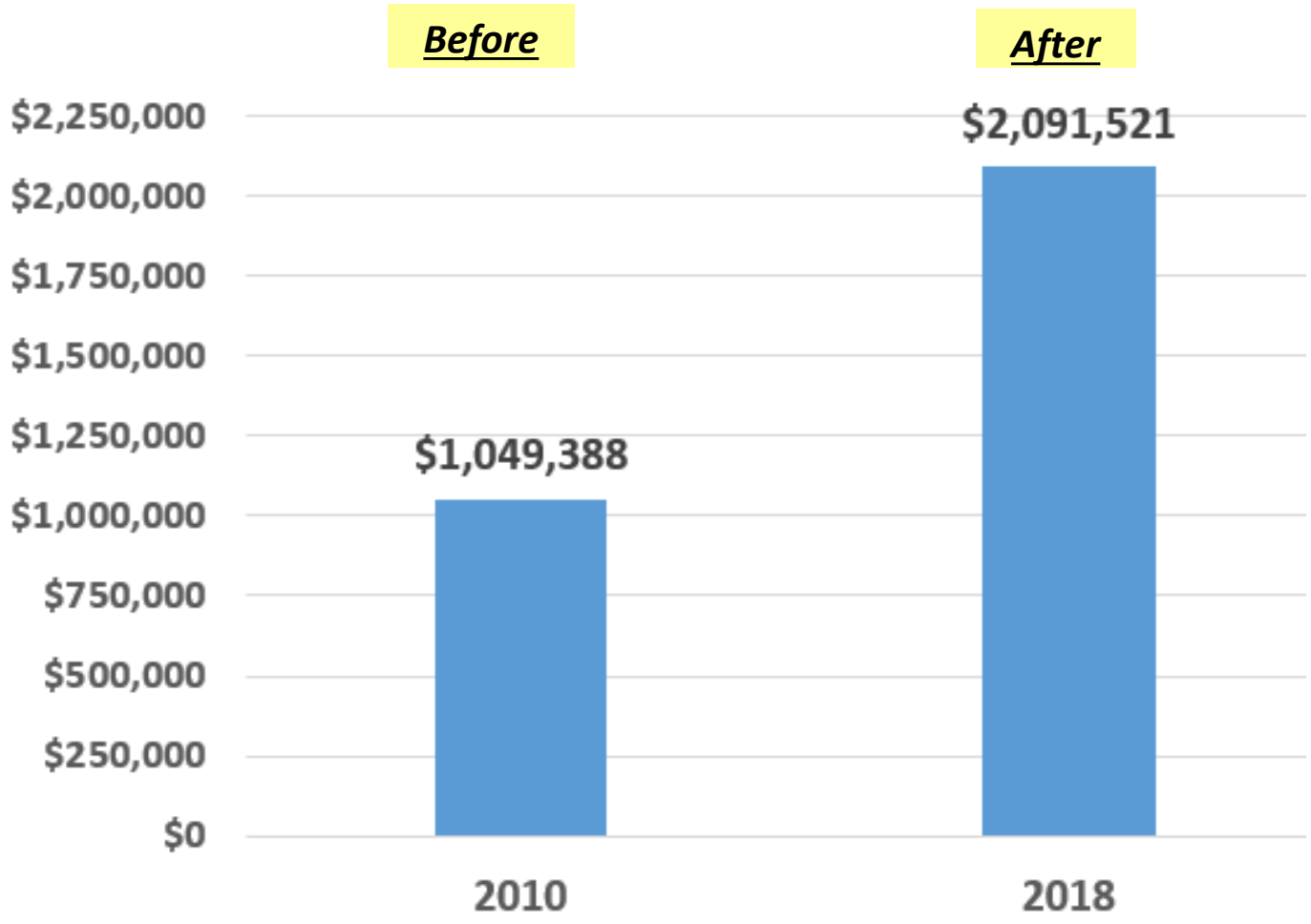
Contribution Margin for Inpatient Discharges



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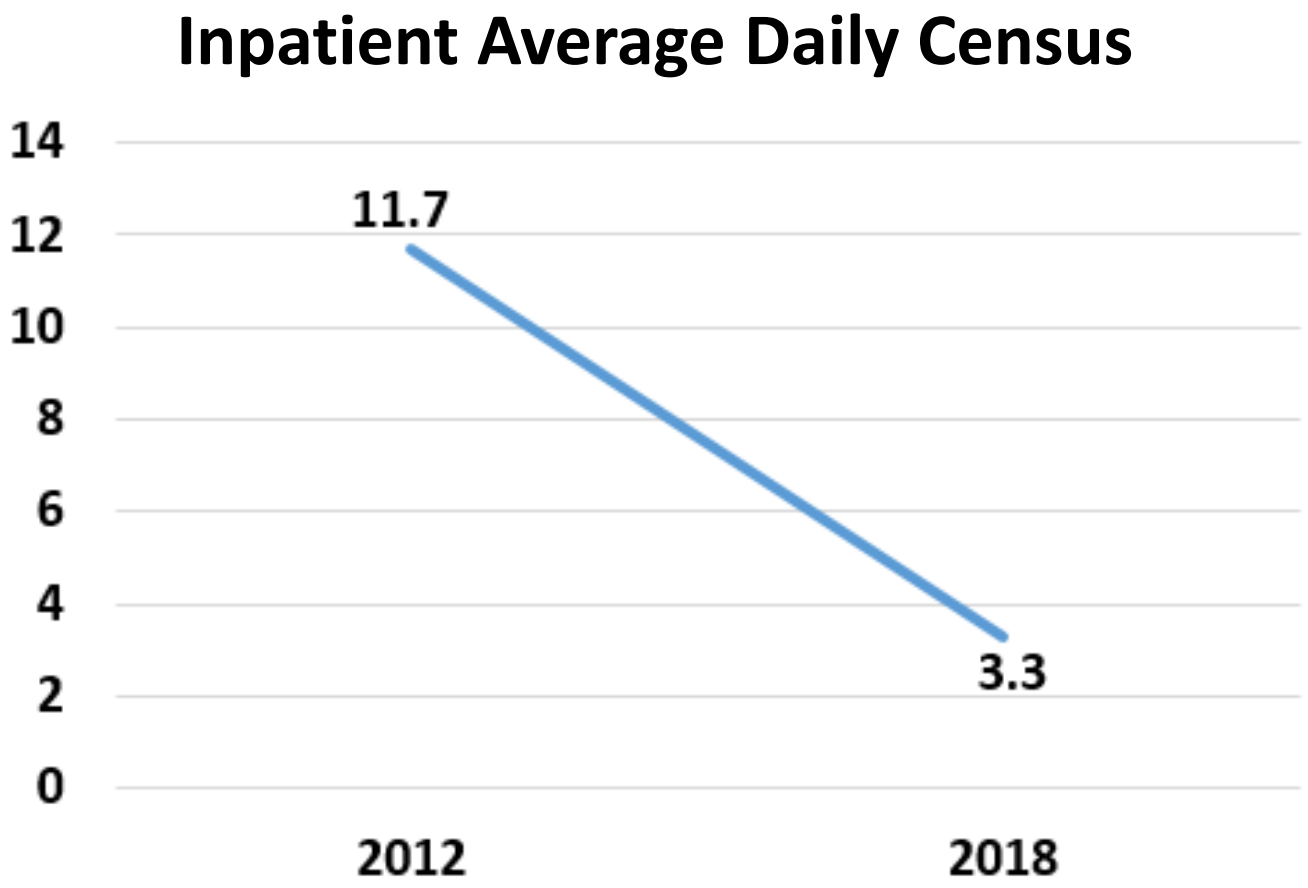
Additional Benefit:
Freeing up Beds for Other Patients



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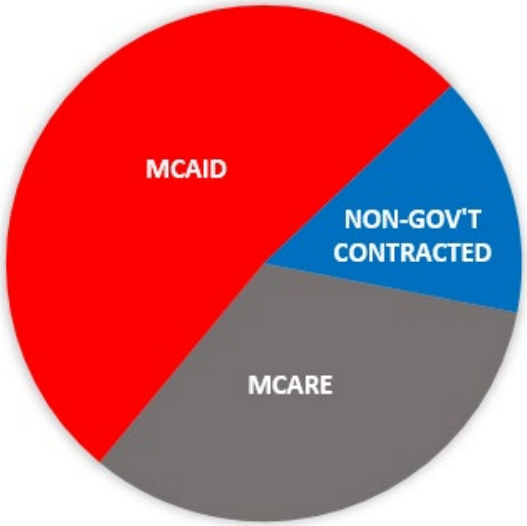
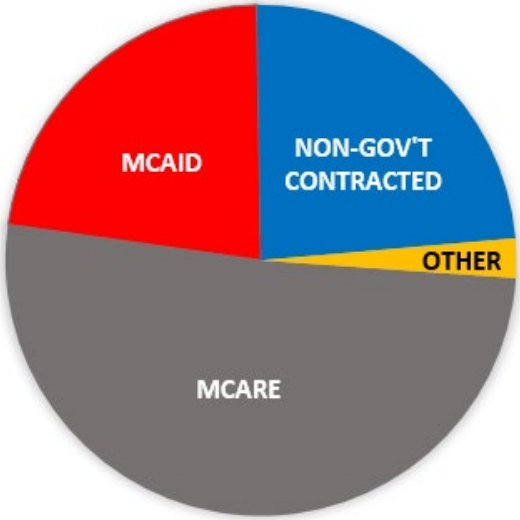
Additional Benefit:
Freeing up Beds for Other Patients

Inpatient Payor Mix

Adults with SCD



Adult General Medicine



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Important Consideration: 340B

- Drug pricing program for outpatient medications, including infusions such as high-cost chemotherapy as well as P.O. medications.
- Administered by U.S. Health & Human Services.
- Intended to reduce federal costs and make high-cost medications more affordable for economically &/or medically vulnerable patients.
- Eligibility determined at the institution level: Medicare/Medicaid Disproportionate Share Hospitals, children's hospitals, other safety net providers.

340B Opportunity Example

Jadenu (Deferasirox) 360mg
NDC: 00078065615 / 30 Tablets

Average Wholesale Price (AWP)	**$5,630**	**Manufacturer-recommended price for hospital to sell Jadenu.**
Typical AWP Contract Pricing	**-17.5%**	**Discount that payors negotiate to pay hospital for medication.**
Revenue Received per Package	**$4,640**	**Amount that hospital receives for medication from payors.**
Jadenu 340B Price	**$2,310**	**Cost to hospital for medication from manufacturer.**
Contribution Margin (CM) per Package	**$2,330**	**Margin for hospital for medication ($4,640-$2,310)**
CM per patient, per year	***$56,697***	***Assumes 720mg per patient/day.***

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Summary

- Data – work with institutional partners (Finance, Data Analytics) to develop data analysis and display.
- Focus on Value – better care, reduced cost.

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Acknowledgements

Dr. John D. Roberts and the Adult Sickle Cell Team

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