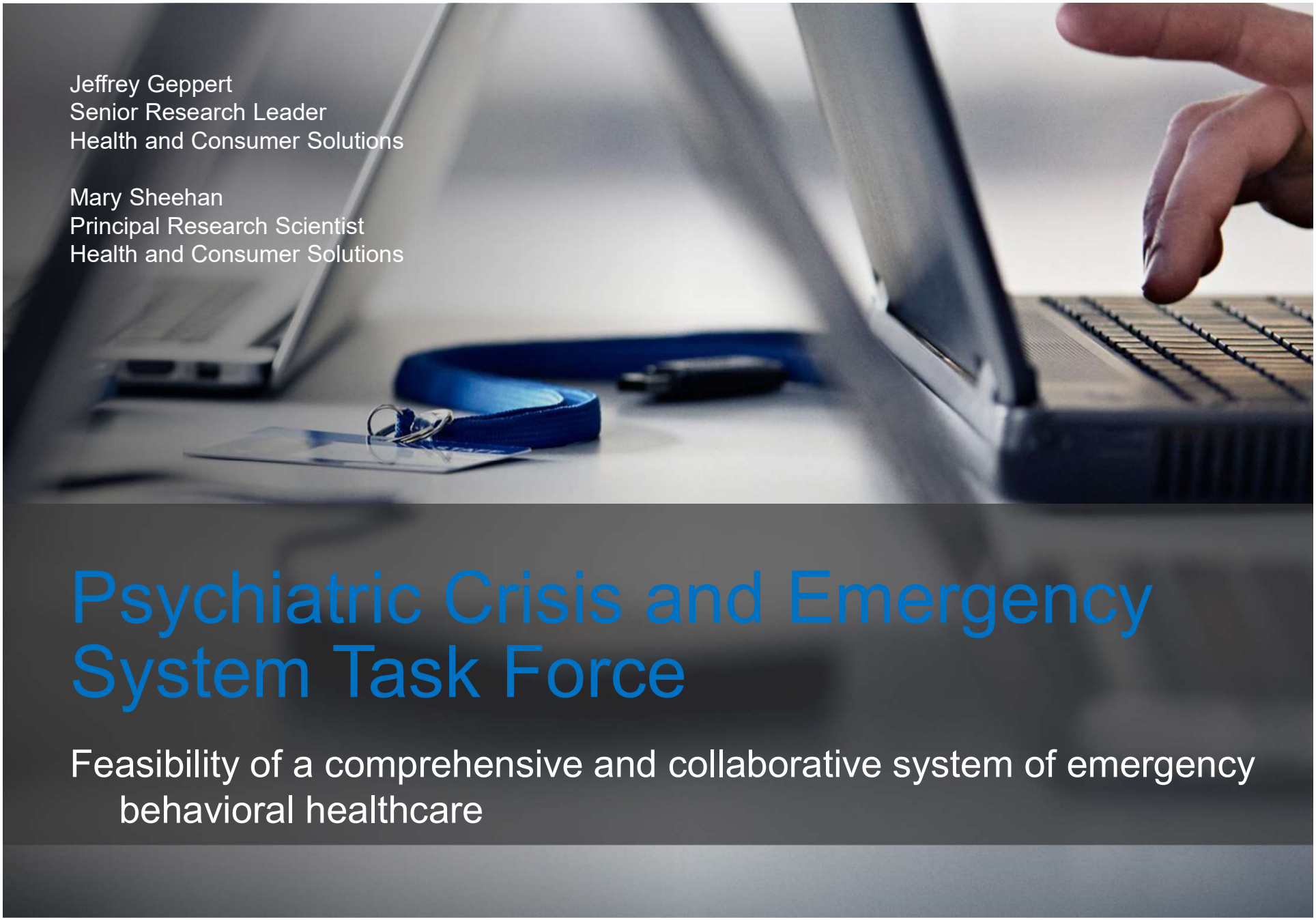

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Psychiatric Crisis and Emergency System Task Force

Feasibility of a comprehensive and collaborative system of emergency behavioral healthcare

BATTELLE

Overview

- Summary of findings
- Current state of emergency behavioral healthcare (BH) in Franklin County
- Prediction of emergency BH utilization in 5 years if no changes in system of care
- Review of 3 alternative and collaborative models
  - Emergency BH-Facility
  - eHub with care coordination
  - BH integration with Primary Care Providers (PCPs)

Summary of Findings

- Behavioral health-related ED visits are increasing each year, and show no signs of slowing.
- The BH Redesign and efforts in reducing opioid-related encounters may have some impact on reducing the number of ED encounters.
- All 3 alternative models of care delivery show the ability to decrease costs to hospitals and EDs.
- For the biggest financial savings the BH Integration model shows the greatest decrease in costs, and likely would improve coordination of patient care.

Current State of Behavioral Healthcare in Franklin County

	2012	2013	2014	2015	2016
BH/SA Diagnosis Encounters	186,176	210,919	225,841	295,928	458,105
Total ED Encounters	2,098,211	2,100,602	2,136,314	2,046,279	2,135,137
% of ED Encounters that are BH/SA related	8.9%	10%	10.6%	14.5%	21.5%

1. For BH patients that get admitted for **inpatient stay**, the average length of stay has increased from 5 days in 2012 to 6 days in 2016, and the average cost in 2012 was $12,881 and in 2016 the average cost was $16,806.
2. For BH patients **seen in the ED and then discharged**, the average cost per encounter in 2012 was $1,233 and in 2016 the average cost increased to $1,706.
    - The costs above reflect the cost-to-charge ratio, meaning taking the total cost and multiplying it by the Ohio cost-to-charge ratio of 0.3, to determine that actual charges for the facility.

Current State Defined

Primary or Secondary BH/SA Diagnosis

Inpatient Encounters — Presented in ED, admitted for an inpatient stay.

- 2016: 91,539 encounters

Emergency Department Encounter — Presented in ED, discharged directly from ED

- 2016: 366,566 encounters

Combined Encounters — Includes all encounters in the ED, regardless of disposition

- 2016: 458,105 encounters
- Contributed to a total of 21.5% of all Franklin County ED encounters

Current State Defined

BH/SA Primary Diagnosis ONLY

Inpatient Encounters — Presented in ED, admitted for an inpatient stay

- 2016: 11,569 encounters
- Contributed to 13% of primary and secondary BH-related inpatient encounters

Emergency Department Encounters — Presented in ED, discharged directly from ED

- 2016: 36,025 encounters
- Contributed to 10% of primary and secondary BH-related ED encounters

Combined Encounters — Includes all encounters in the ED, regardless of disposition

- 2016: 47,594 encounters
- Contributed to 10% of the primary and secondary Dx BH-related ED encounters
- Contributed to 2% of all Franklin County ED encounters

Future of Emergency BH in Franklin County

(Primary and Secondary BH/SA Dx)	2016	2022
Inpatient Encounters	91,539	99,485
Emergency Department Encounters	366,566	398,385
Netcare Encounters	9,041	9,826
Total BH Encounters	467,146	507,696

(Primary BH/SA Dx ONLY)	2016	2022
Inpatient Encounters	11,569	12,573
Emergency Department Encounters	36,025	39,152
Netcare Encounters	9,041	9,826
Total BH Encounters	56,635	61,551

Future of Emergency BH Costs in Franklin County

(Primary and Secondary BH/SA Dx)	2016	2022
Inpatient Costs	$1,854,215,199	$2,015,168,160
Emergency Department Costs	$783,359,550	$851,355,990
Total Costs	$2,637,574,749	$2,866,524,150

(Primary BH/SA Dx ONLY)	2016	2022
Inpatient Costs	$234,341,664	$254,678,688
Emergency Department Costs	$81,385,740	$88,449,750
Total Costs	$315,727,404	$343,128,438

Three Alternative and Collaborative Models of Care

Franklin County emergency behavioral healthcare delivery redesign options

Franklin County Behavioral Health Emergency Facility

Model 1

Assumptions for BH Facility Model

- The maximum estimated to be $78 million dollars
  - Reflects top-of-the-line facility that would include 100 beds
  - A behavioral health specific ED inclusive of 3 levels of care (secure, stabilization, and monitoring)
  - Imaging and laboratory capabilities, public areas, family/caregiver amenities, and administration and support services
- The facility is a free-standing building and will have the capacity to see 51,100 patients per year
- Netcare will transfer 14% of patients from Netcare to ED for medical clearance, and 10% of BH facility patients will transfer to ED for medical clearance
- Care coordination staff and capacity are present on-site in the behavioral health facility

Impact on Outcomes from a BH Facility

Outcome	Metric	Impact on Current State
ED visits for behavioral health	412,726 encounters	Decrease of 45,379 encounters per year seen in an ED for behavioral health needs.
Inpatient admissions for behavioral health	82,471 admissions	Decrease of 9,068 admissions per year for inpatient stay for behavioral health.
Discharges from ED	330,255 discharges	Decrease in the number of patients discharged and not admitted for inpatient stay.
Incarcerations of people with behavioral health diagnosis	1,915 incarcerations	Decrease of 211 incarcerations of people with behavioral health diagnosis.
Cost associated with ED visit for behavioral health	$705,761,460	Decrease of $77,598,090 per year for ED costs associated with behavioral health services.
Costs associated with inpatient stay for behavioral health	$1,670,532,576	Decrease of $183,682,623 per year for inpatient costs for behavioral health patients that have been admitted from the ED.

*Based on Primary and Secondary BH Dx Data

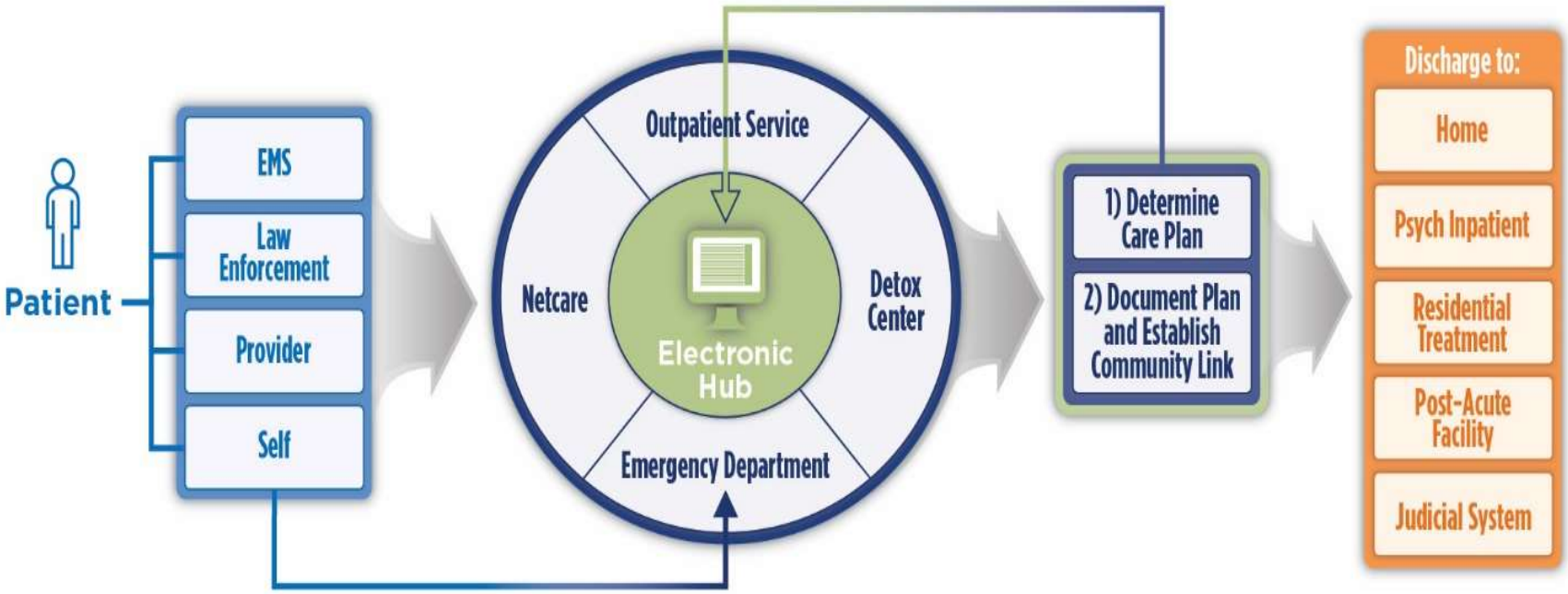
Impact on Outcomes from a BH Facility

Outcome	Metric	Impact on Current State
ED visits for behavioral health	42,366 encounters	Decrease of 5,228 encounters per year seen in an ED for behavioral health needs.
Inpatient admissions for behavioral health	9,505 admissions	Decrease of 2,064 admissions per year for inpatient stay for behavioral health.
Discharges from ED	36,174 discharges	Decrease in the number of patients discharged and not admitted for inpatient stay.
Incarcerations of people with behavioral health diagnosis	1,915 incarcerations	Decrease of 211 incarcerations of people with behavioral health diagnosis.
Cost associated with ED visit for behavioral health	$72,445,860	Decrease of $8,939,880 per year for ED costs associated with behavioral health services.
Costs associated with inpatient stay for behavioral health	$192,533,280	Decrease of $41,808,384 per year for inpatient costs for behavioral health patients that have been admitted from the ED.

*Based on Primary BH Dx Data

Behavioral Health eHub

Model 2



Assumptions for an eHub Model

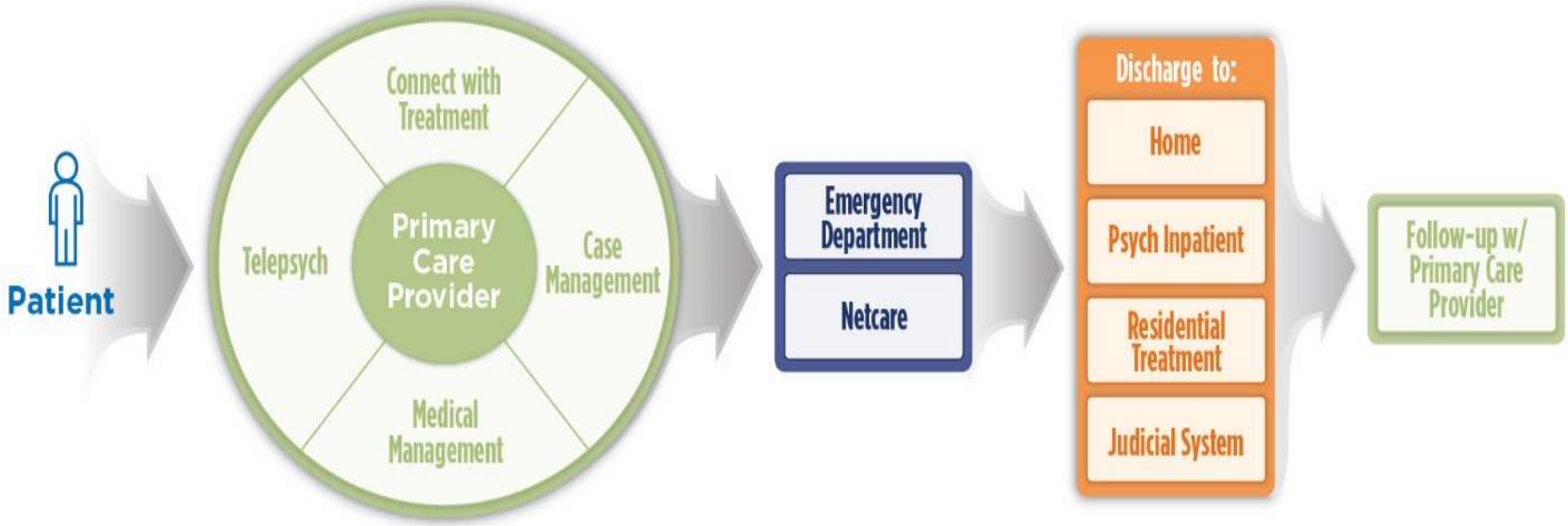
- Costs for using CliniSync services for a provider to updating patient information, consent, or other clinical information:
  - $300 per physician per year for organizations less than 10 physicians
  - For every physician over 10, the price is $240 per physician per year, and continues to go down with an increased size of organization
  - *Example*: A participating organization with 21 providers would pay $300 each for the first 10 Providers and $240 each for the next 10 providers and $180 for the last provider which would equal $5580 per year
- Electronic platforms are in place to support the level of communication and interoperability necessary for this model
- The data security for behavioral health patients will be agreed upon for all health systems, first responders, and data coordinators, and the health systems will agree to update their data platforms accordingly
- The ADAMH detox center has a capacity to serve 2,400 patients per year

Impact on Outcomes from an eHub

Outcome	Metric	Impact on Current State
ED visits for behavioral health	430,271 encounters	Decrease of 27,834 encounters per year seen in an ED for behavioral health needs.
Inpatient admissions for behavioral health	85,977 admissions	Decrease of 5,562 admissions per year for inpatient stay for behavioral health.
Discharges from ED	398,384 discharges	Decrease in the number of patients discharged and not admitted for inpatient stay.
Incarcerations of people with behavioral health diagnosis	2,126 incarcerations	No change in incarcerations of people with behavioral health diagnosis.
Cost associated with ED visit for behavioral health	$735,763,410	Decrease of $47,596,140 per year for ED costs associated with behavioral health services.
Costs associated with inpatient stay for behavioral health	$1,741,550,112	Decrease of $112,665,087 per year for inpatient costs for behavioral health patients that have been admitted from the ED.

Behavioral Health Integration into Primary Care Practices

Model 3



Assumptions for BH Integration into Primary Care

- There 1,615 active primary care providers, and an acceptable ratio of clinician to patient ratio is 1:101, resulting in 163,115 patients enrolling with a primary care provider.
- All primary care providers participate in the behavioral health integration model.
- Primary care teams include capabilities like telepsych, social workers, or psychologists to provide optimal care.
- Other systems that have implemented PCP integration have seen a decrease in inpatient admissions by 17%, and a decrease in incarcerations by 24%.
- With patients receiving primary care management of their mental illness, 49% of patients will still require emergency services.

Impact on Outcomes from BH Integration

Outcome	Metric	Impact on Current State
ED visits for behavioral health	380,225 encounters	Decrease of 77,880 encounters per year seen in an ED for behavioral health needs.
Inpatient admissions for behavioral health	75,977 admissions	Decrease of 15,562 admissions per year for inpatient stay for behavioral health.
Discharges from ED	398,384 discharges	Decrease in the number of patients discharged and not admitted for inpatient stay.
Incarcerations of people with behavioral health diagnosis	1,616 incarcerations	Decrease of 510 incarcerations of people with behavioral health diagnosis.
Cost associated with ED visit for behavioral health	$650,184,750	Decrease of $133,174,800 per year for ED costs associated with behavioral health services.
Costs associated with inpatient stay for behavioral health	$1,538,990,112	Decrease of $315,225,087 per year for inpatient costs for behavioral health patients that have been admitted from the ED.

Conclusions

- Behavioral health-related ED visits are increasing each year, and show no signs of slowing.
- The BH Redesign and efforts in reducing opioid-related encounters may have some impact on reducing the number of ED encounters.
- All 3 alternative models of care delivery show the ability to decrease costs to hospitals and EDs.
- For the biggest financial savings the BH Integration model shows the greatest decrease in costs, and likely would improve coordination of patient care.

Reference for Coding

- For reporting purposes, the ICD-9-CM and ICD-10-CM Official Guidelines for Coding and Reporting define “other diagnoses” as additional conditions that affect patient care because they require one or more of the following:
  - Clinical evaluation
  - Therapeutic treatment
  - Diagnostic procedures
  - Extended length of hospital stay
  - Increased nursing care and/or monitoring

  https://www.cms.gov/Medicare/Coding/ICD10/Downloads/2018-ICD-10-CM-Coding-Guidelines.pdf

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It can be done

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