Essential Clinical Dataset – ECD

New England Nursing Informatics Consortium

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VP and CNO for Foundation and Premier

NENIC
New England Nursing Informatics Consortium
Nurses Transforming Healthcare Through Informatics

March 26, ,2019

Cerner

ECD Collaborative – Why?

- Most organizations have over-designed their EHRs resulting in a lot of “noise” and non-value added data elements
- Era of EHR Optimization
- There is not an established standard for the essential clinical data that needs to be documented in an EHR
- Anticipated Outcomes of the Collaborative:
  - Organizations will use the ECD as the foundation for EHR optimization
  - ECD will establish a national (international) standard that is EHR agnostic

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U.S. National Agenda item

"ONC is focused on working with CMS to **minimize clinician documentation burden,** increasing the usability of electronic health records, and promoting interoperability of health IT."

The standardization of nursing documentation in a way that is ***evidence-based***, ***standardized across settings***, **and allows for the reuse of data elements** will be critical for continuity of care across the interdisciplinary care team.

Currently, variation in the length, content, and value of data collected in nursing assessment is significant and often unnecessary

ANA and ONC Documentation Burden/Standardization and Care Planning Virtual Work Group

Rebecca Freeman, PhD, RN, PMP

Former CNO Office of the National Coordinator for HIT

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International Agenda item

- The Joint Position Statement between the Canadian Nurses Association (CNA) and the Canadian Nursing Informatics Association (CNIA) published in March 2017 recognizes the need for **“a standardized approach to nursing documentation in all clinical practice settings across Canada**”.

- **Australian Nursing Informatics Position Paper August 6, 2017 Element 7:**
  - “Nurse informaticians insist on **the adoption of nationally agreed nursing data standards**…..for improved data integration, information sharing, performance monitoring, data analytics, patient safety and quality.”

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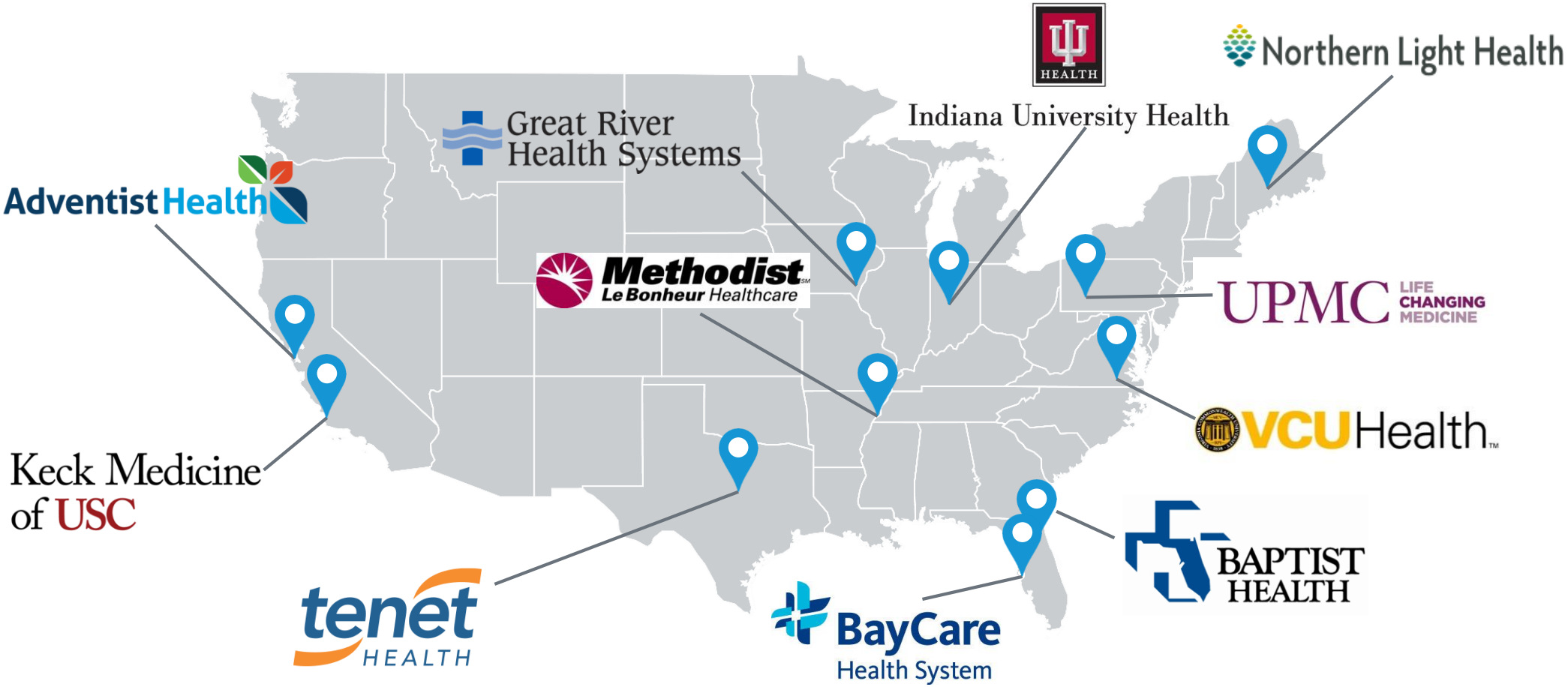
ECD Collaborative Members *Formed June 2016*



190+ Facilities **25,000+ Beds**

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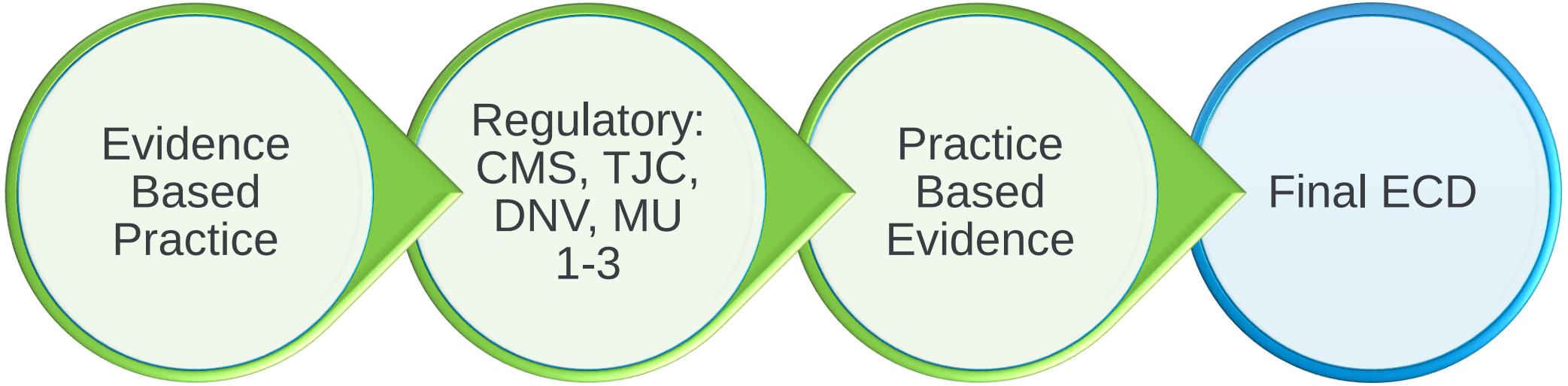
Three pronged approach



Review of literature for <u>content</u>, *not process or workflow*

United States, Federal Regulatory, *not state or global*

Environmental scans of 12 clients' production data for frequency of data element and utilization metrics

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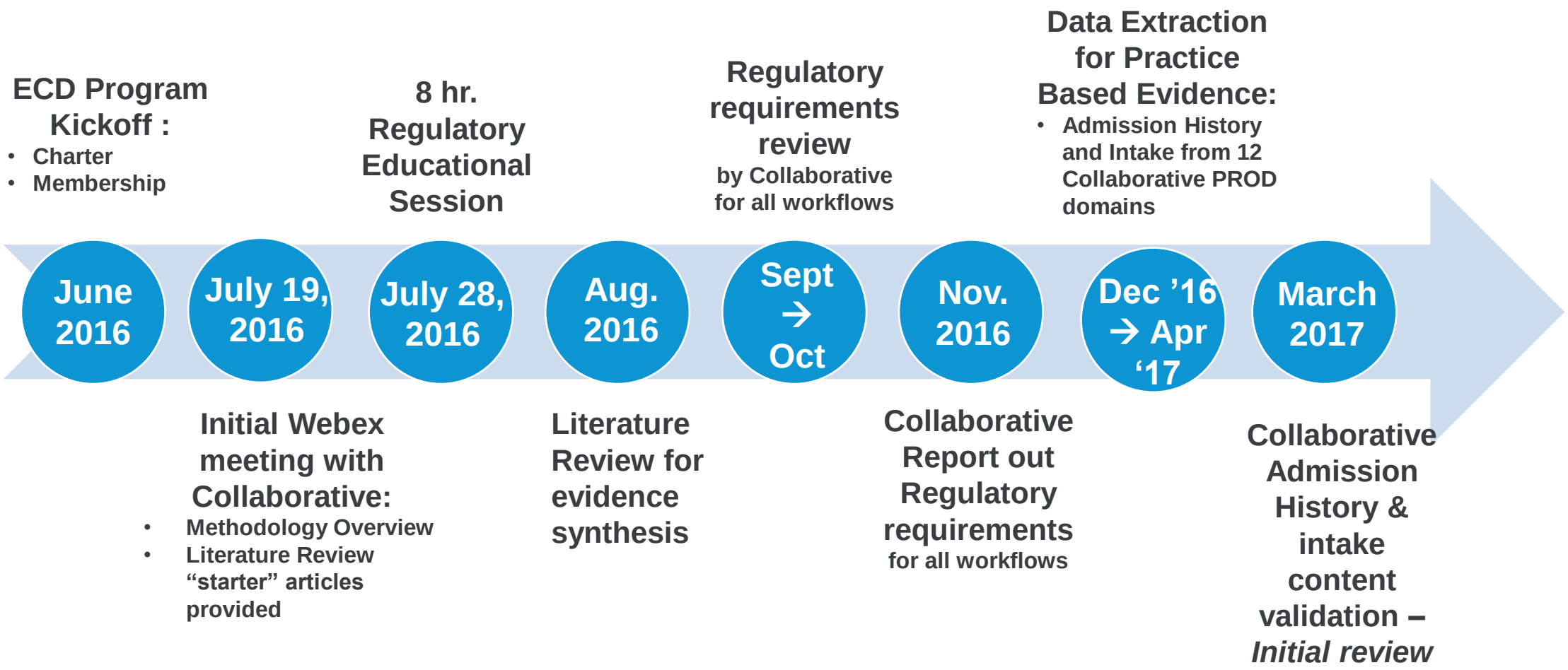
Adult ECD Timeline: Admission History & Intake



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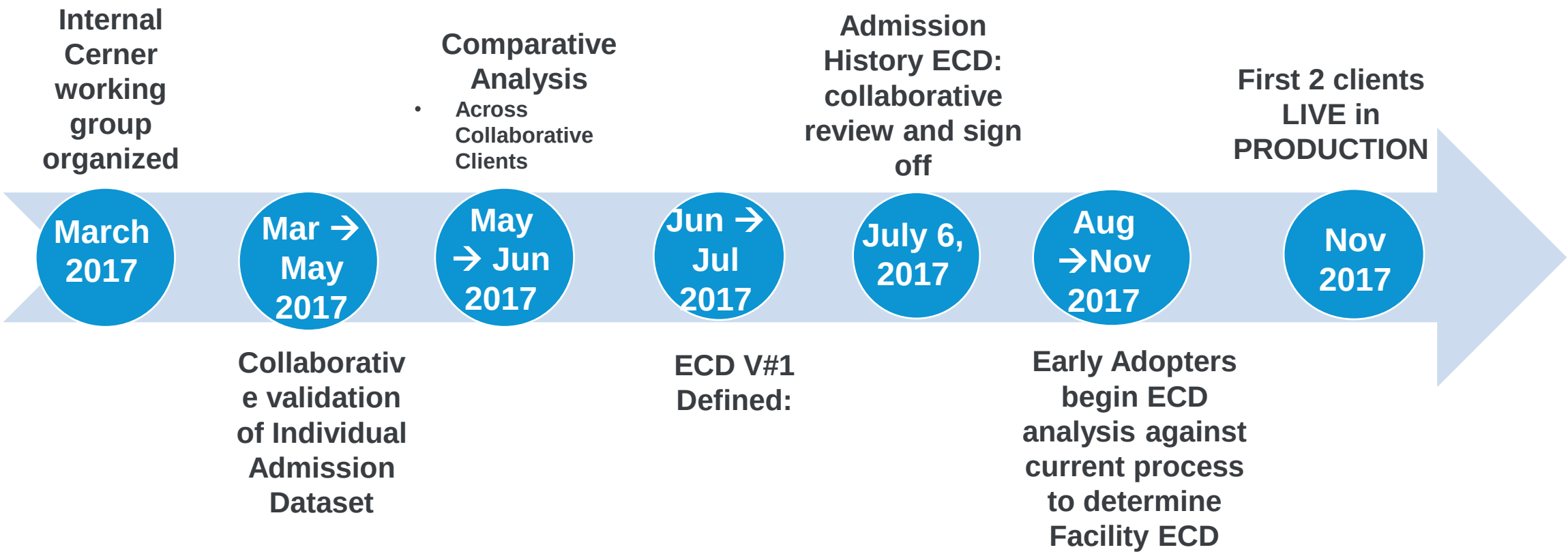
Adult ECD Timeline: Admission History & Intake



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Baseline Variation – Adult Admission History Intake Assessment

Client	# of Electronic Forms	# of Sections	# of Questions
#1	4	36	318
#2	5	23	230
#3	3	26	280
#4	2	29	278
#5	2	25	208
#6	13	57	986
#7	4	51	371
#8	6	22	265
#9	1	21	194
#10	8	66	530
#11	2	29	299

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Cross Map - Admission History questions

Category	Question	Client 1	Client 2	Client 3
General	Chief complaint	Reason for visit history	Patient's Chief Complaint	Reason for Visit
General	Arrival date/time	Arrival date/time		
General	Arrived from	Arrived from	Admitted From	
General	Mode of arrival	Transportation to unit	Mode of Arrival	
General	Admit from another facility			
General	Recent admission	Readmission review	Hospital inpatient last 30 days	
General	Admission info given by	Admission info from	Information Provided by	
General	Accompanied by relationship	Accompanied by		
General	Accompanied by name		Name of Person with Patient	
General	Preferred language patient	Preferred language	Pref. Language to Discuss Healthcare Info	Preferred Language for Health Care Info
General	Preferred mode of communication	Preferred method of communication		Preferred Communication Mode
General	Emergency contact name	Emergency contacts	Emergency Contact 1	Contact Person Name and Number
General	Emergency contact relationship		Emergency Contact 1 Relationship	
General	Emergency contact number		Emergency Contact 1 Phone	Contact Person Name and Number
General	Primary caregiver name	Name/Number of family notified		
General	Primary caregiver number	Name/Number of family notified		
General	Notify family/caregiver of admission	Notify family of admission to hospital	Requested Notification of Family/Rep	
General	Notify PCP of admission	Notify your MD of admission to hospital	Requested Notification of PCP	
General	PCP contact information	Name/Number of MD notified	Family Physician	
General	Interpreter needed	Interpreter/Translator name, if used	Communication Need - Language	Interpreter Required
General	Interpreter information	Interpreter/Translator name, if used		

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Frequency and utilization algorithm

Client frequency
8 of 12 facilities included the question

Utilization average
>60% avg. charting of that question

Client Frequency	Utilization Average	Question	Client 1	Client 1 DTA Utilization	Client 2	Client 2 DTA Utilization	Client 3	Client 3 DTA Utilization
12	88%	Chief complaint	Reason fo	88%	Patient's	82%	Reason fo	91%
4	66%	Arrival date/time	Arrival dat	86%				
10	85%	Arrived from	Arrived fr	84%	Admitte	80%		
10	74%	Mode of arrival	Transporta	81%	Mode of	72%		
5	22%	Admit from another facility						
6	81%	Recent admission	Readmissi	98%	Hospital	100%		
11	74%	Admission info given by	Admissior	81%	Informat	26%		
7	75%	Accompanied by relationship	Accompan	74%				
3	20%	Accompanied by name			Name of	27%		
12	73%	Preferred language patient	Preferred	98%	Pref. Lan	100%	Preferred	99%
9	44%	Preferred mode of communication	Preferred	17%			Preferred	97%
11	47%	Emergency contact name	Emergenc	80%	Emergen	92%	Contact P	78%
8	36%	Emergency contact relationship			Emergen	88%		
10	42%	Emergency contact number			Emergen	88%	Contact P	78%
8	3%	Primary caregiver name	Name/Nu	3%				
6	3%	Primary caregiver number	Name/Nu	3%				
5	51%	Notify family/caregiver of admission	Notify fam	51%	Request	99%		
4	61%	Notify PCP of admission	Notify you	48%	Request	99%		
5	16%	PCP contact information	Name/Nu	3%	Family P	70%		
12	25%	Interpreter needed	Interprete	17%	Commun	1%	Interpret	99%
7	3%	Interpreter information	Interprete	17%				

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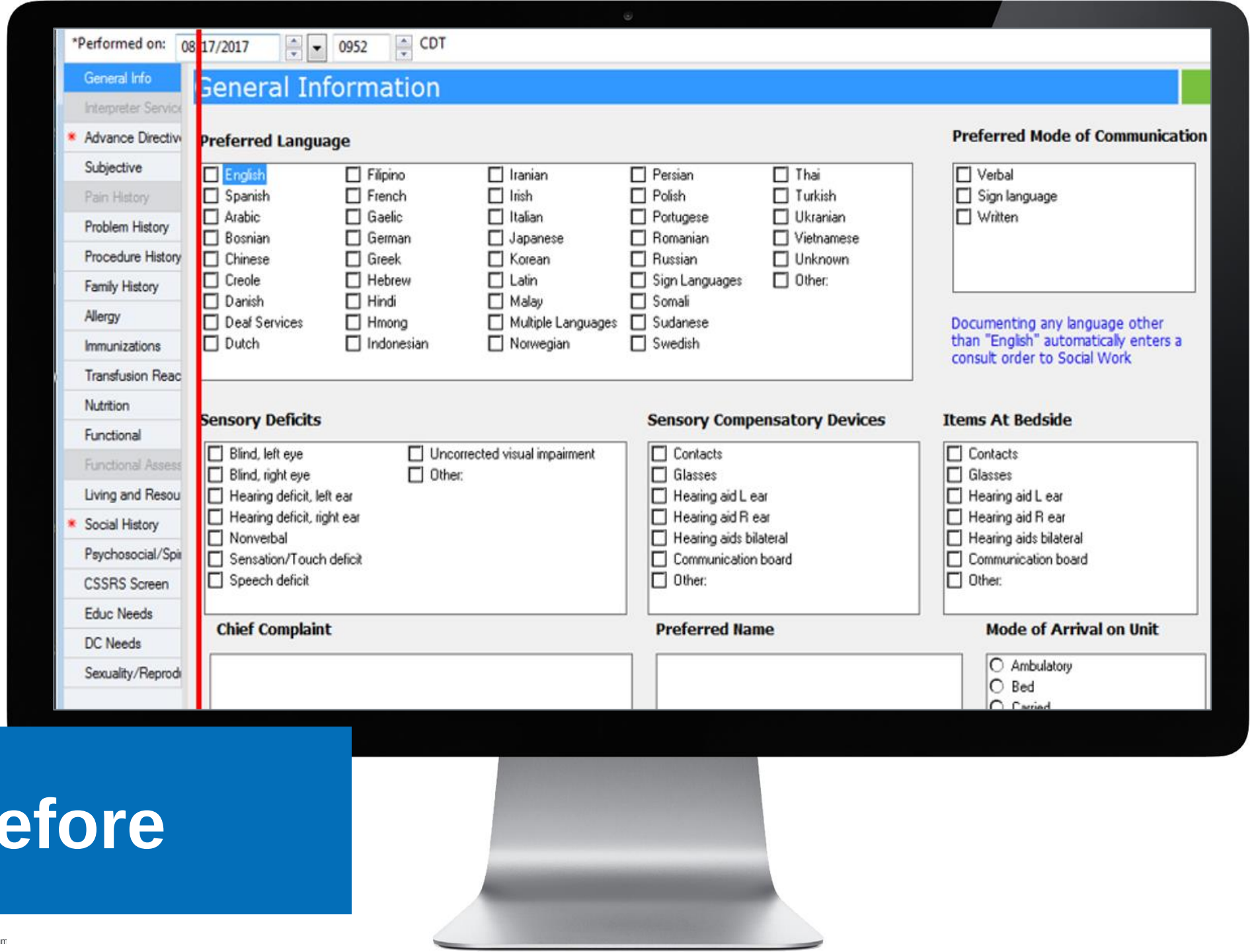

Before

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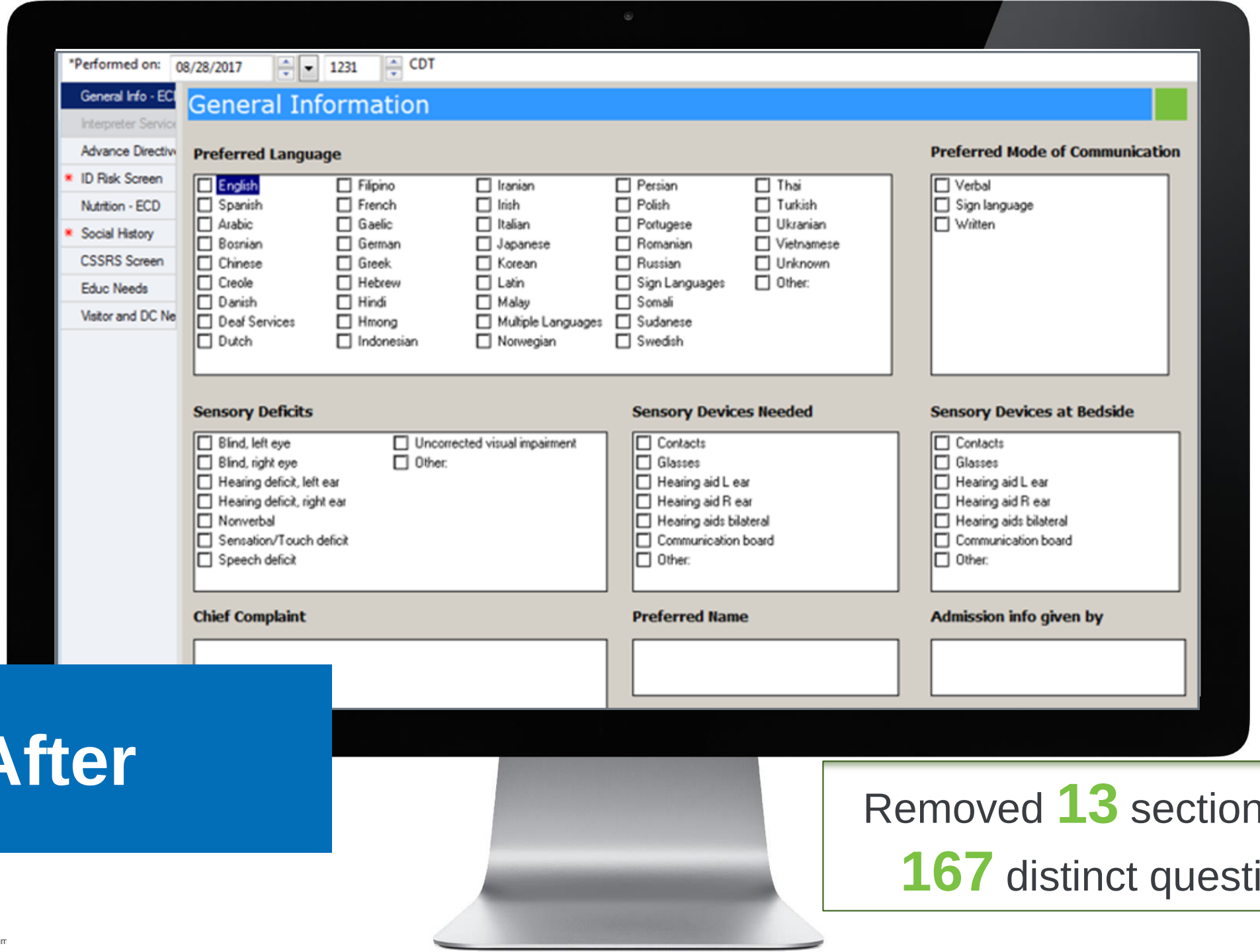

After

Removed **13** sections and **167** distinct questions

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Key Findings and Considerations

- Senior Nursing Leaders (CNOs) have to be involved
- Nursing Shared Governance councils were best suited for the review of the ECD.
  - Led by Nursing Informatics
- Challenged the “because we have always done it”
  - Asked WHY five times
    - “Did the information NEED to be collected on admission?”
    - “If yes, did the RN have to collect ? “
    - “If yes: part of ECD, If NO: what role/department should be collecting it?”
- Policy was driving practice with no relevant reason or evidence
- Local critical thinking and judgement applied when reviewing ECD
  - What is needed for the local patient population or regulations
- The process was just as valuable as the outcome

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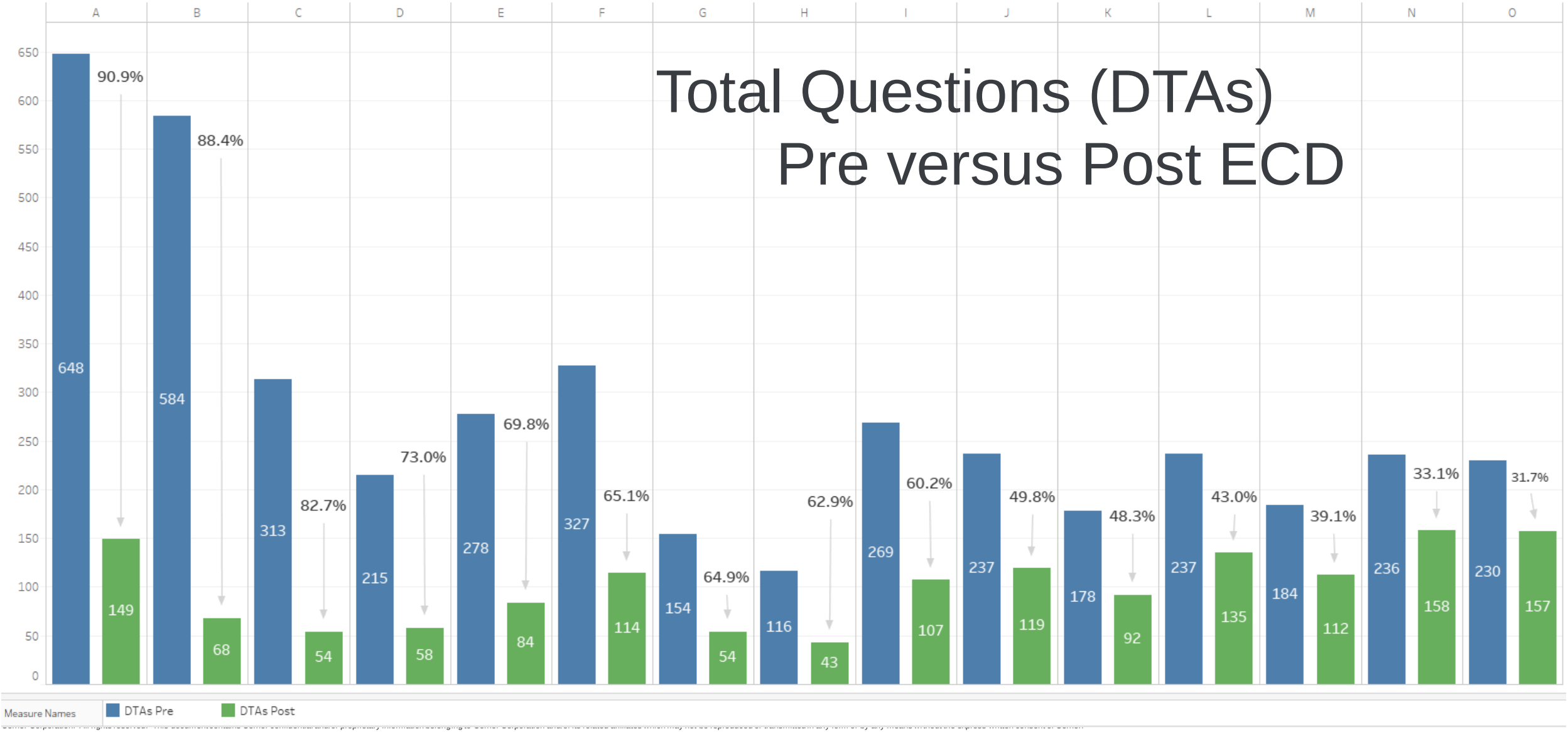
Implementation Outcomes

Adult Admission History ECD Results – 15 Clients



Results Across 10 Early Adopters

Baseline vs. 30 days post ECD

Total Questions:

Reduced an average of **100 Questions**

Total Time: *(h:mm:ss)*

Reduced an average of **0:2:21 minutes**

Total Clicks:

Reduced an average of **37 clicks**

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Peds ECD: Scope, Phases, Goals

Scope

- Acute, inpatient, general pediatric population
- Documentation within the United States
  - Federal regulatory requirements

Nursing Processes / Phases

1. **Admission History & Intake**
2. **Physical Assessment:**
   - Initial and Ongoing
3. **Ongoing Care:**
   - Interventions, Procedures, ADLs, I&O, Lines, Tubes, Drains

Goals

- Establish standard pediatric nursing content to be leveraged across the Cerner client base
- Embed in the Cerner Model System
- Utilize as the foundation for EHR configuration & optimization
- Contribute to creation of national standard for pediatric nursing content

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Peds Admission History Definition & Guiding Principles

- Admission History definition
  - Nursing documentation of historical information for the admission of the general acute-care pediatric patient

Guiding Principles

- Regulatory
- Evidenced based
  - ANA Pediatric Scope and Standards
  - AAP
- Is the RN the right person to collect on Admission
- Is the documentation actionable

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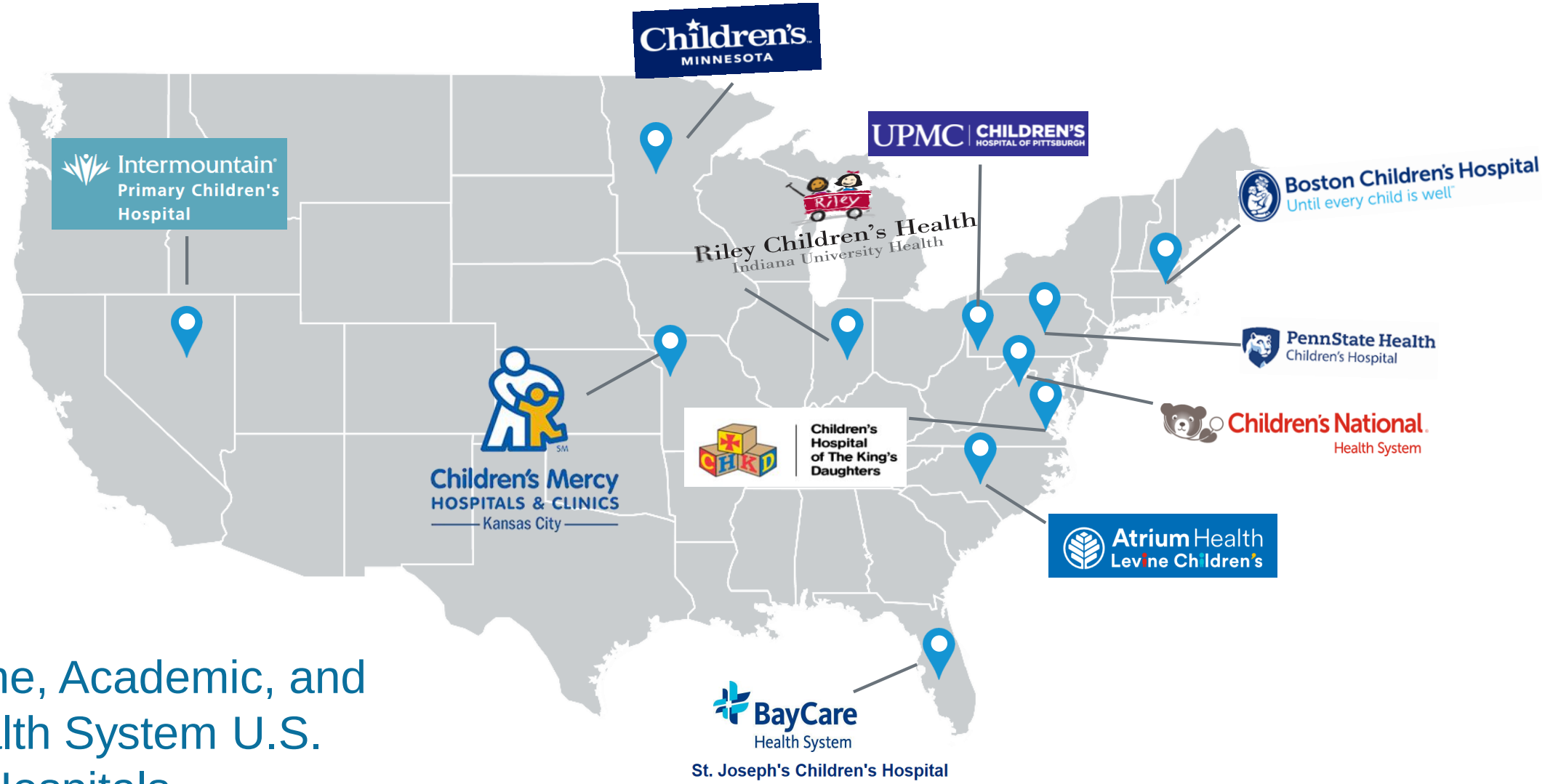
Pediatric ECD Collaborative Members



Stand Alone, Academic, and Large Health System U.S. Pediatric Hospitals

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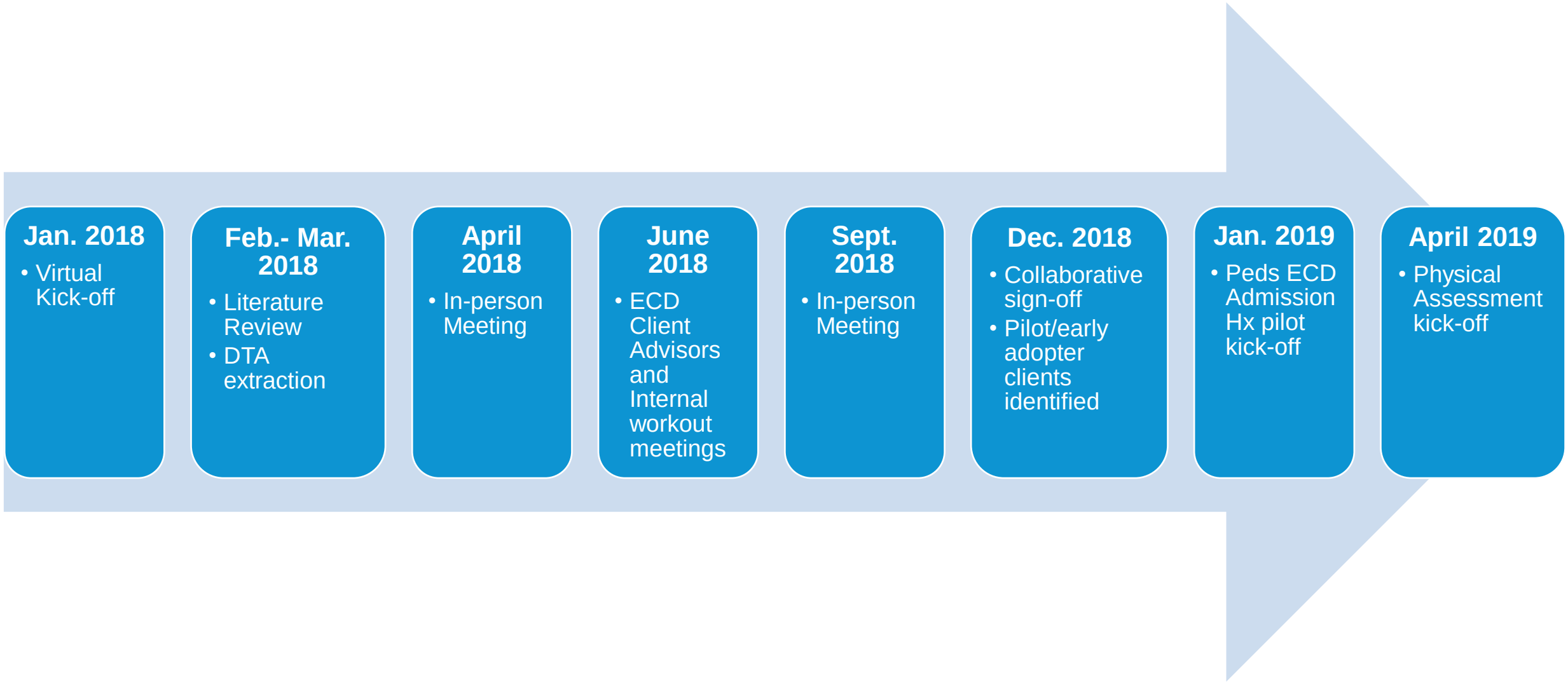
Peds ECD Timeline



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Baseline Peds Admission History Intake

Peds Collaborative Clients	Sections	DTAs
1	16	101
2	22	149
3	12	176
4	14	201
5	29	255
6	25	214
7	20	274
8	22	281
9	40	361
10	39	606
11	47	653
12	36	720

Avg. # Sections = 27

Avg. # DTAs = 333

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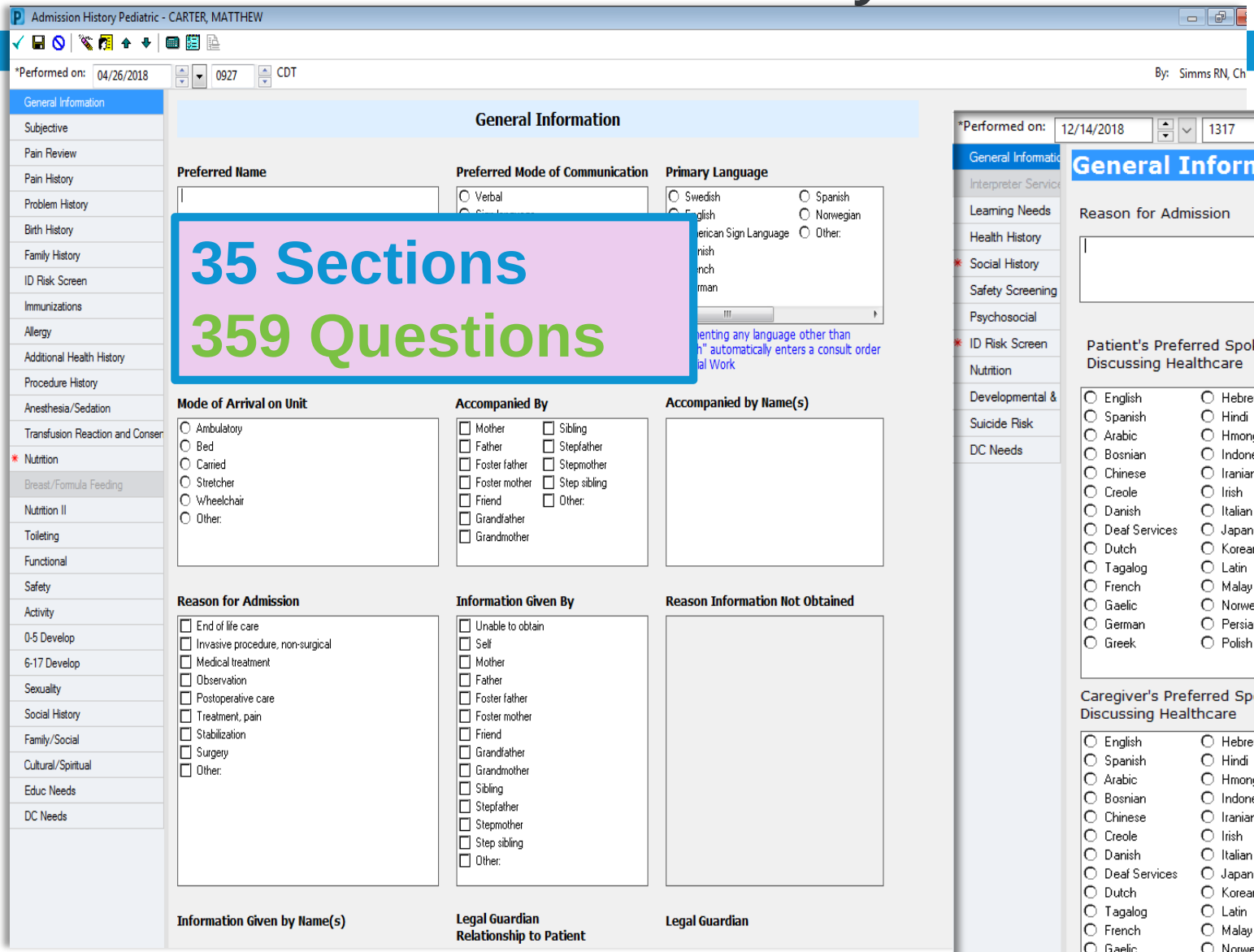
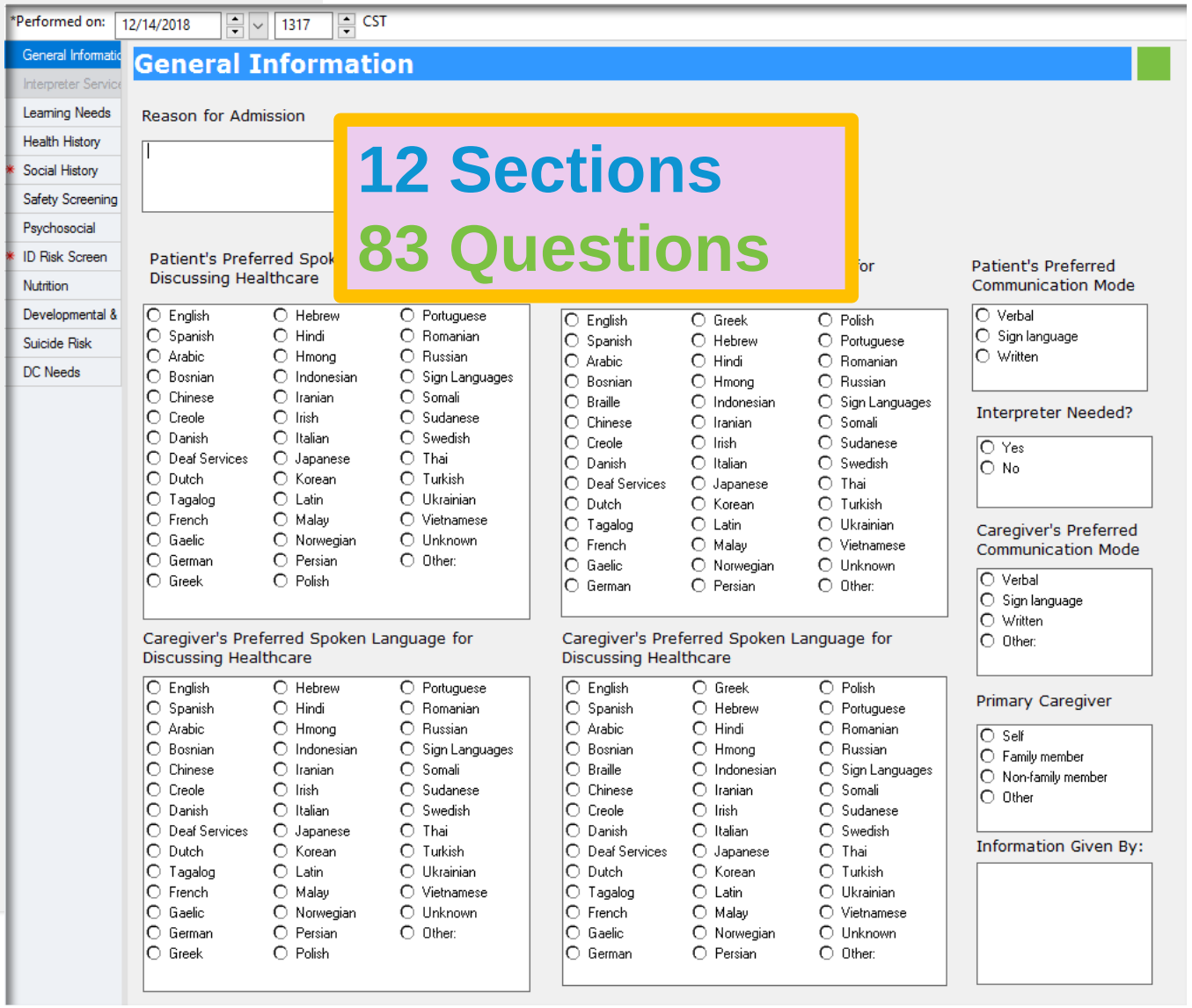
Peds Admission History: Model vs. ECD





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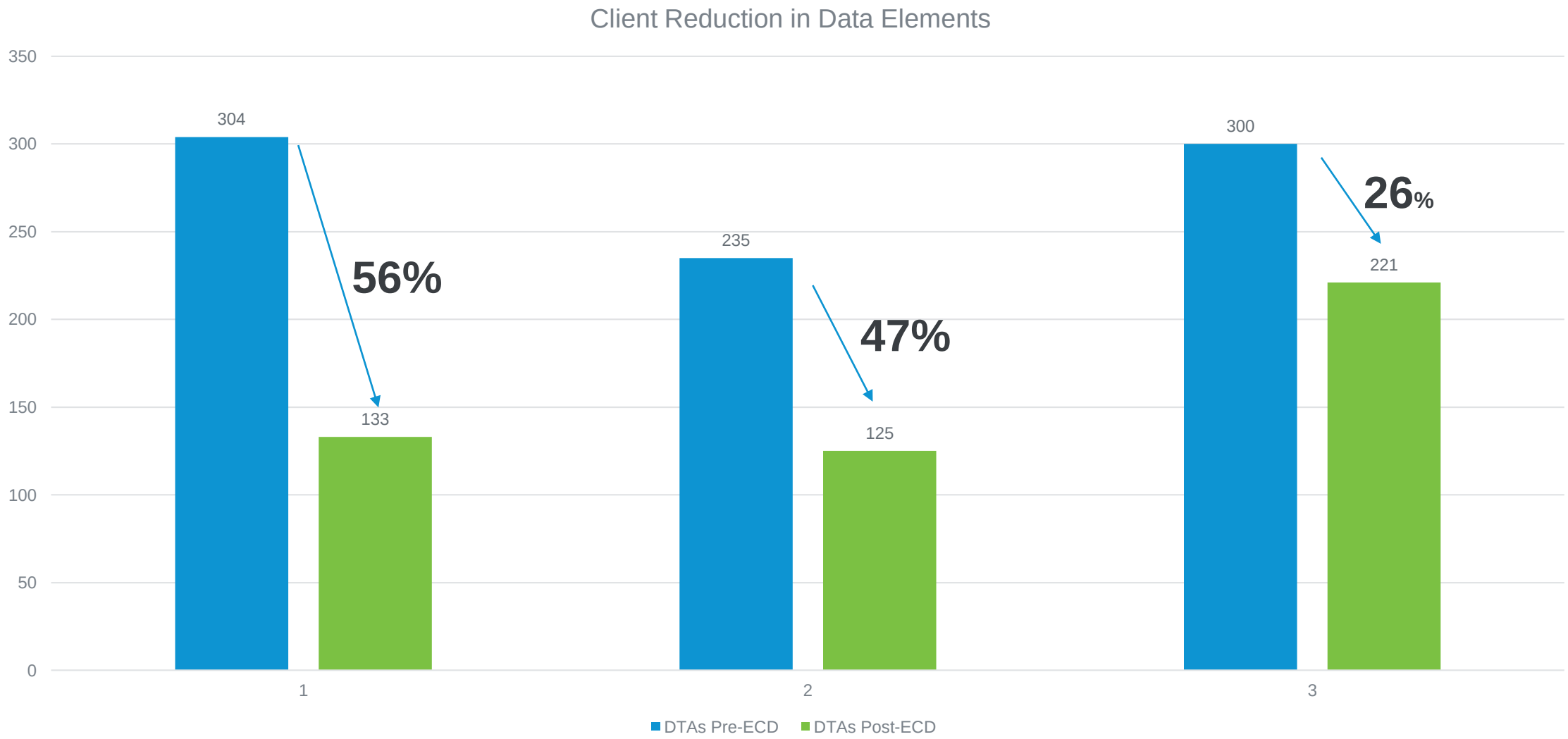
Data Reduction – Peds Admission Intake



First 3 Clients live: March 2019

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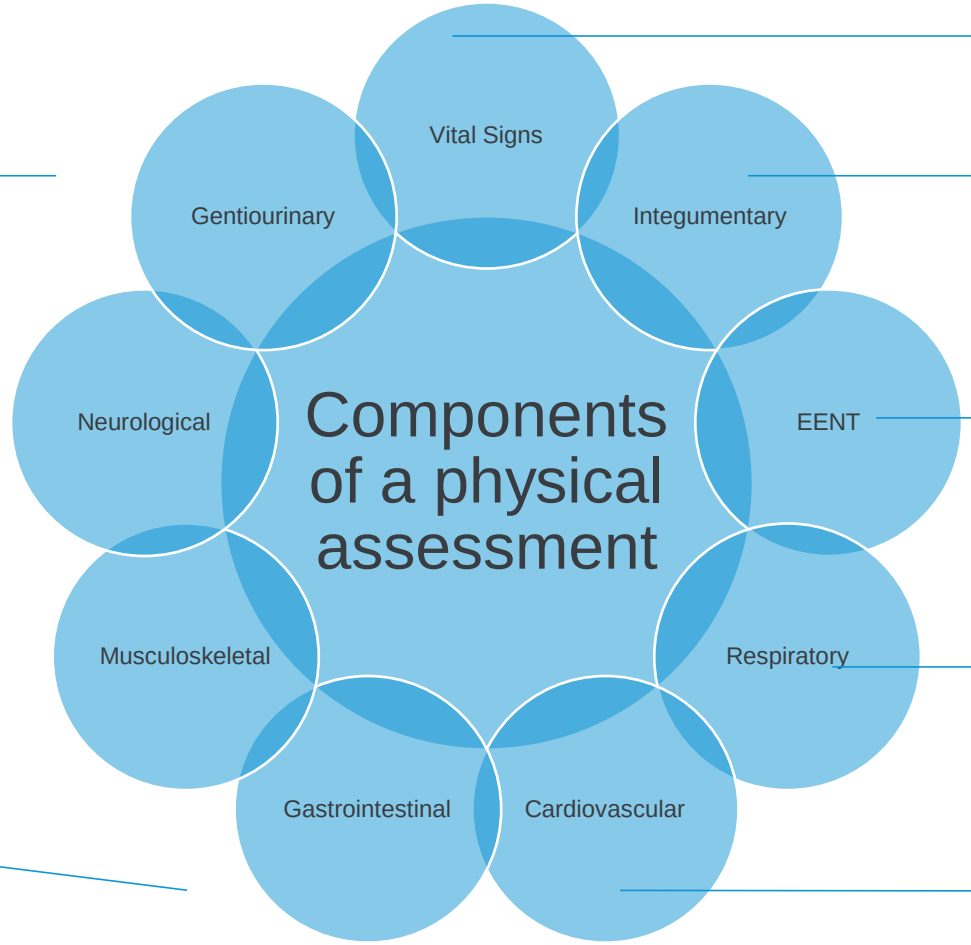
Adult Physical Assessment ECD

Review of Systems and Physical Assessment



Temperature, Pulse, Respirations, Blood Pressure, Pain

Skin, Hair Nails

Skull, Face, Eyes, Ears, Mouth, Neck Muscles, Lymph nodes, Trachea, Thyroid gland

Lungs, External Chest

Heart, Peripheral Vascular System

Intestines, Liver, Spleen

Muscles, Bones, Joints

LOC, Mental Status, Cranial Nerves, Reflexes, Motor Function, Sensory Function

Kidneys, Bladder, Genitalia

Bare, B. G., Brunner, L. S., Smeltzer, S. C., & Suddarth, D. S. (2004). *Brunner & suddarth's textbook of medical-surgical nursing* (10th ed.). Philadelphia: Lippincott Williams & Wilkins.

Estes, M. Z. (2002). *Health assessment & physician assessment* (2nd ed.). Albany, NY: Thomson Learning Inc.

Nettina, S. (2014). *Lippincott manual of nursing practice* (10th ed.). Philadelphia, PA: Lippincott, William's & Wilkins. Retrieved from: https://www.r2library.com/resource/detail/1451173547/ch0005s0130.

Weber, J., & Kelley, J. (2007). *Health assessment in nursing* (3rd ed.). Philadelphia, PA: Lippincott, William's & Wilkins.

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Physical Assessment Design from Collaborative

Client	Number of Assessment Questions
#1	308
#2	476
#3	573
#4	405
#5	526
#6	187
#7	577
#8	789
#9	1092
#10	397

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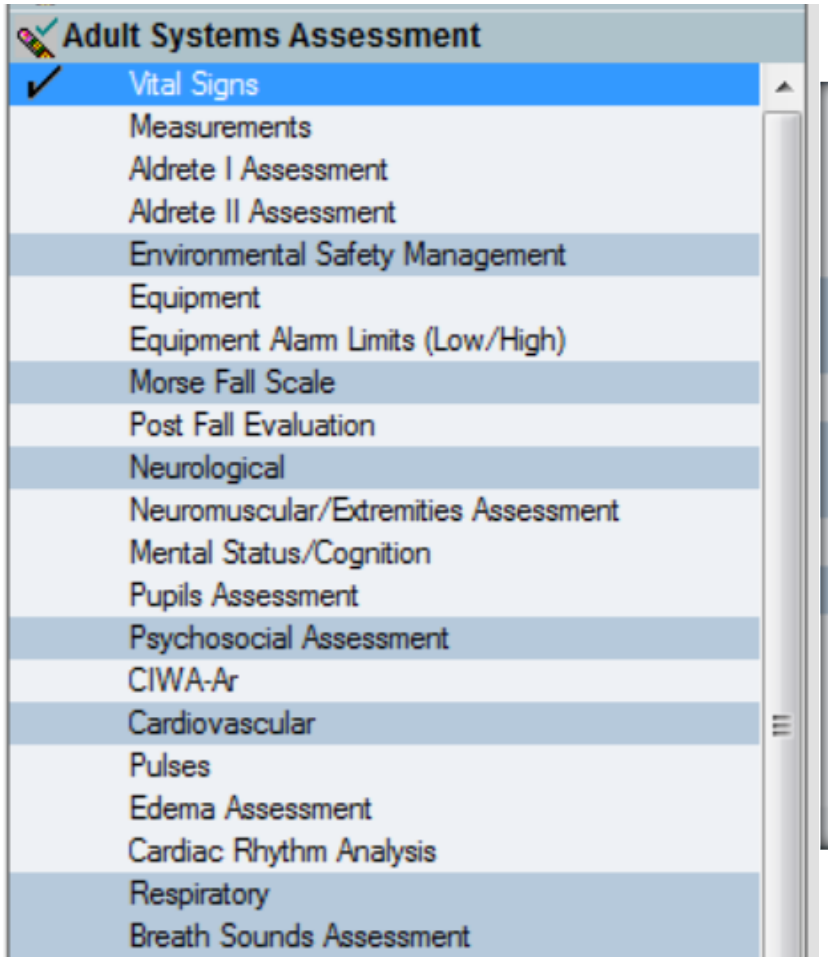
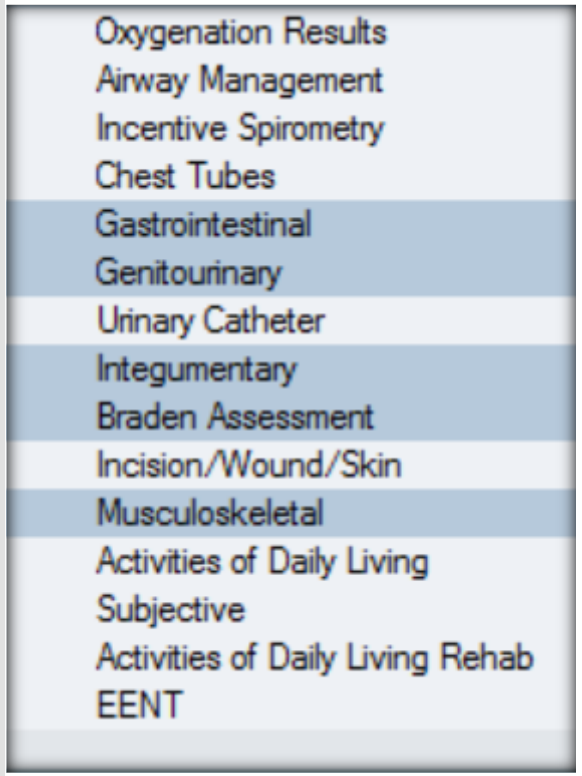
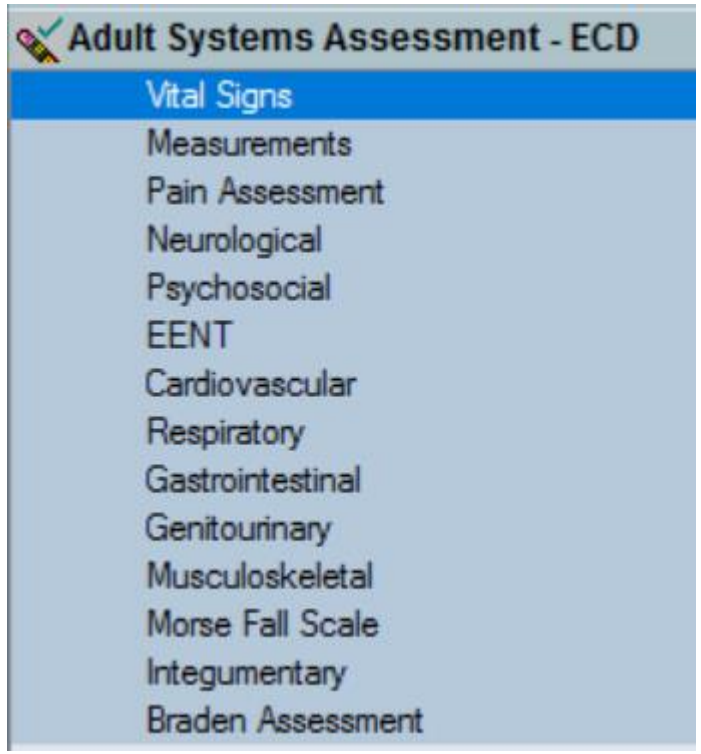
Systems Assessment Band

36 sections*





ECD – 14 sections



ECD excluded sections (16) – Seizure Assessment, Stroke, Ongoing Columbia Suicide Severity Rating, CIWA-AD, Central Line, Airway Management, Non-Invasive Ventilation, Invasive Ventilation, Vent Bundle, Chest Tubes, GI Ostomy, GI Tubes, Urinary Catheter, Urostomy, Post Fall Evaluation, Surgical Drains/Tubes

***Plus 24 excluded sections**

***Exclude – Item is available within IVIEW, but is pulled in as needed for the patient's condition**

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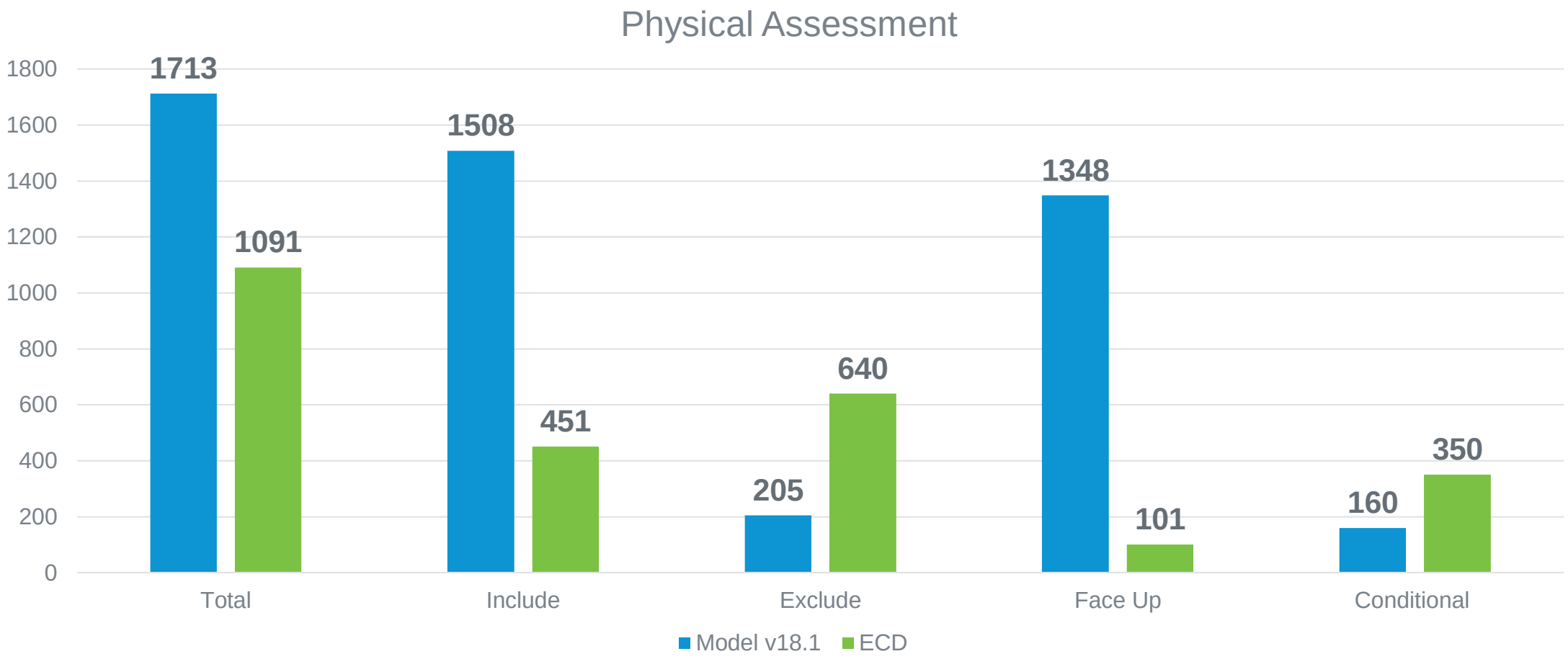
By the numbers* V5



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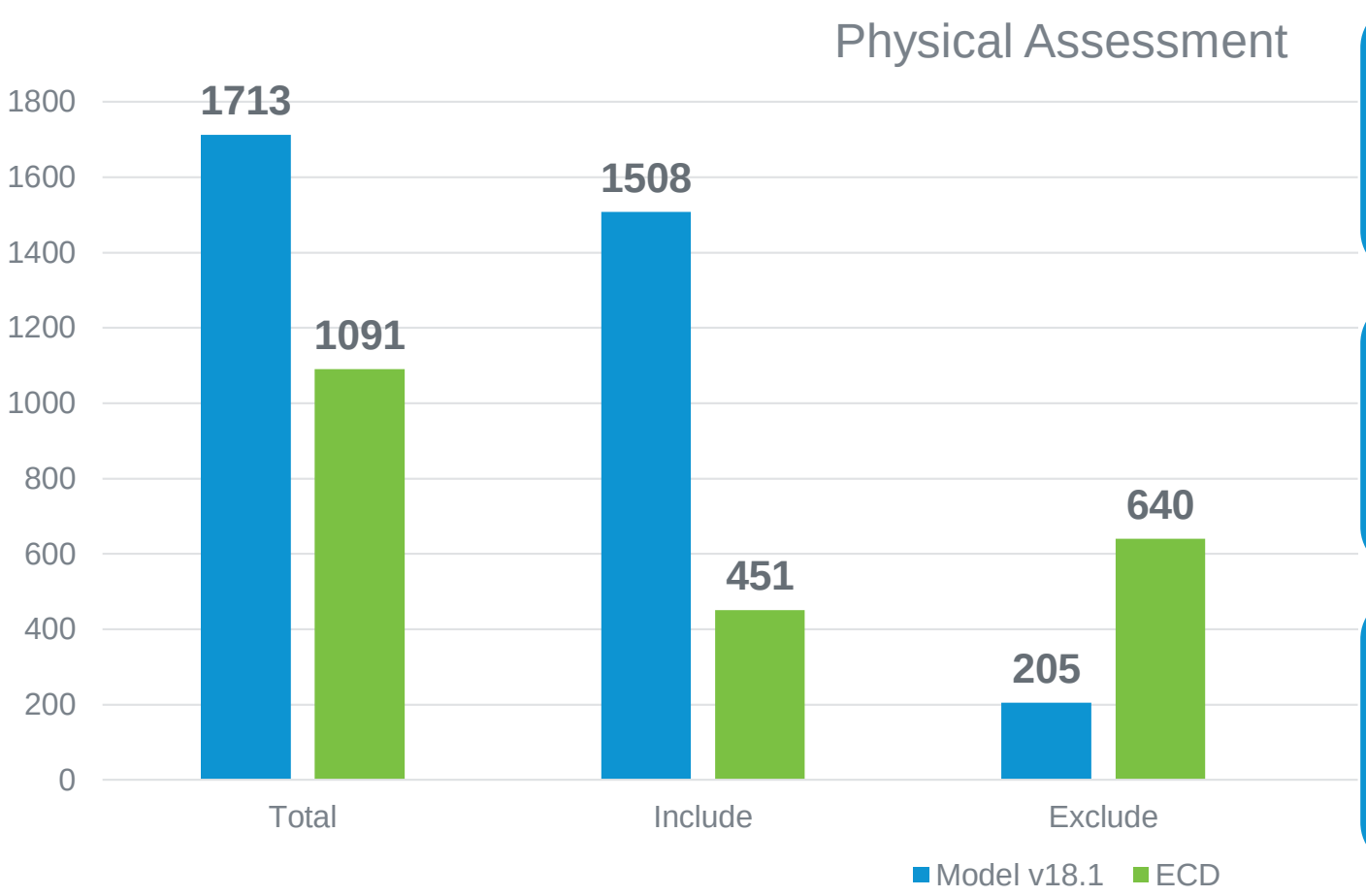
By the numbers…V5

Getting rid of non-used, non-value add items



Total items reduced by 36%

Includes reduced by 71%

Excludes increased by 212%

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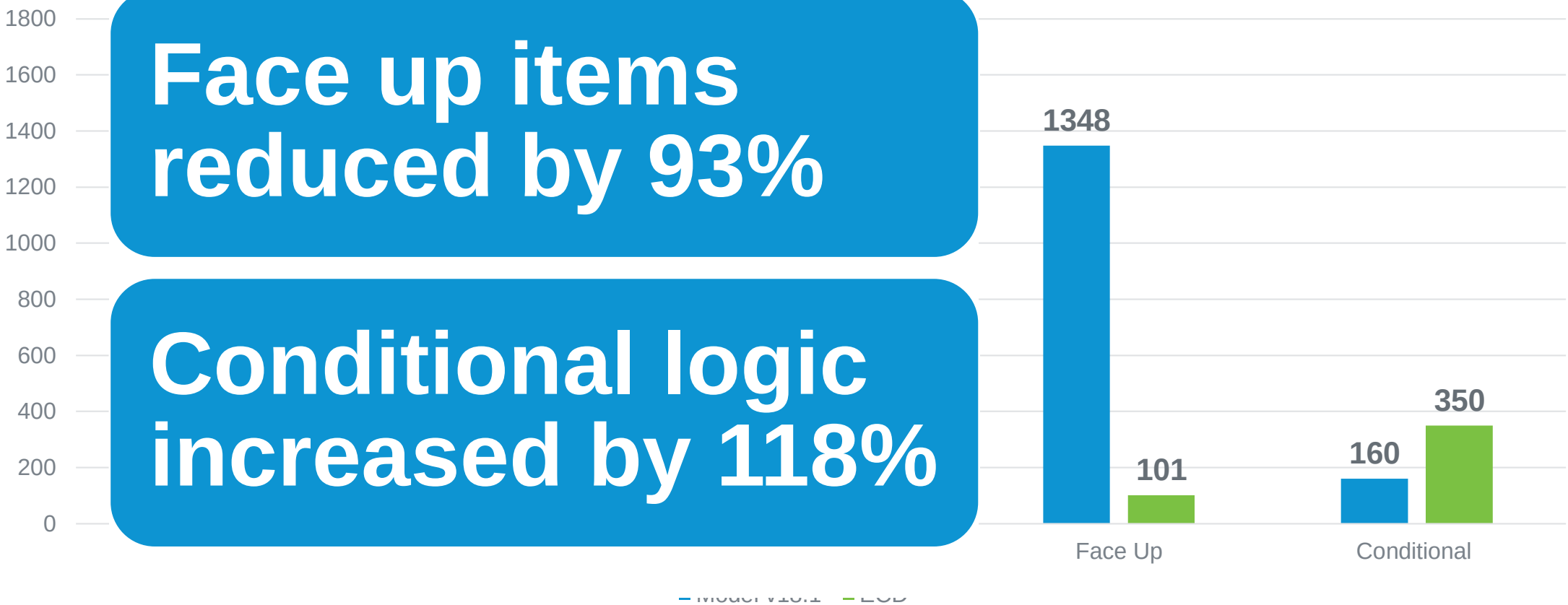
By the numbers… V5

Eliminating the noise, adding some “intelligence”

Face up items reduced by 93%

Conditional logic increased by 118%



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Metrics

Qualitative

- Staff Surveys Developed
  - Admission: RN
  - Physical Assessment: RN and other care team providers
- Available for all clients to administer surveys pre & post

Quantitative

- # of Distinct Questions
- Average Active Time
- Average Clicks
- Single Sign %
- Average % of Total DTAs Charted per Sign
- Average # of DTAs Charted per Sign
- The Number of Conditional DTA's
- Number of Required DTAs
- Cost Savings *(calculated from reduction is time)*

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ECD Initiatives - Recap

- **Adult Med-Surg Collaborative**
  - ✓Adult Admission Intake
  - ✓Physical Assessment
- **Pediatric Collaborative**
  - ✓Peds Admission Intake
  - Peds Physical Assessment
  - Peds 23 hour Observation/Per-Op Surgery Intake
- **Behavioral Health Collaborative**
  - BH Intake Assessment
- ✓ **Adult 23 hour observation/Pre-Op Surgery Intake**
- **Adult Critical Care Collaborative**
  - Kicking off April 2019
- **Women's Health & OB Admission Intake**
  - Kicking off Spring 2019
- **Non-US Collaboratives**
  - ✓Canada – one site live on Adult Admission December 2018
  - Australia – initial planning and development charter in process
  - UK and Middle East: initial planning

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QUESTIONS

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