

# HARRIS HEALTH SYSTEM

**Epic Pediatric Redesign  
February 2018**

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## **Pediatric Redesign Team**

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# I. The Problem:

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## 1. Cognitive load

- A. Provider & Nursing - documentation requirements by age
  - i. Questionnaires/Flowsheet
  - ii. Smart Set- Orders
  - iii. Notes
  - iv. Charges
- B. Vaccination history review- determine needed vaccinations based on age
- C. Immunization
  - ✓ Document **historical** administration(s)
  - ✓ Document **current** administration(s)
  - ✓ Document ImmTrac (State)
  - ✓ Consent forms: Immunization, TVFC, ImmTrac

# I. The Problem: Providers & Nursing

Chart Review

Care Everywhere

Rooming

Document List

Documentation ...

Review Flowshe...

Flowsheets

Growth Chart

Immunizations

Notes

Order Entry

Plan

Wrap-Up

Communications

Sign Visit

Care Teams

Questionnaires

## Rooming

[Visit Info](#) [Vital Signs](#) [Pain Assessment](#) [Allergies](#) [Medications](#) [History](#) [Smoking Assessment](#) [Goals](#) [Developmental](#) [Hearing/Vision](#) [Verify Rx Benefits](#) [Reconcile Dispenses](#) [Disclaimer](#)

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**Visit Information** [click to open](#)

Reason for Visit  
None

Recent Visits with Monterrey, Ana C, MD  
None

Other Visits in Pediatrics ⌵

Date	Provider	Primary Dx
12/30/2016		Follow up
11/21/2016		Partial facial nerve palsy
11/09/2016		Abnormal findings on newborn screening

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**Vital Signs** [click to open](#)

[+ New Set of Vitals](#) [Open Vital Signs](#)

None Taken

[Doc Flowsheets](#)

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**Pain Assessment** [click to open](#)

[+ New Reading](#)

No data found.

[Go to Doc Flowsheets](#)

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**Allergies/Contraindications** [click to open](#)

[Show:](#)  Deleted  Expired

No Known Allergies Last Updated by Perez, Marisa Deann, LVN on 11/7/2016 9:09 AM [\(History\)](#)

No Known Allergies  
Some items are currently hidden due to your view settings. [Display Hidden Allergies/Contraindications](#)

[Mark as Reviewed](#) Last Reviewed by Canas, Herminia on 12/30/2016 at 3:49 PM: Fully Assessed [\(History\)](#)

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**Medications** [click to open](#)

Medication	Active?	Last Dose	Start Date	End Date	Provider
<a href="#">artificial tears (REFRESH LACRI-LUBE) 56.8-42.5 % Oint</a>			11/21/16	--	Cowling, Betsy Ann, MD
Instill in right eye As directed.					
<a href="#">cholecalciferol (D-VI-SOL) 400 unit/mL Drop</a>	Taking		11/01/16	--	Cowling, Betsy Ann,

# I. The Problem: Physicians/Providers

18mo Test is a 18m.o. Female brought in today by Her {FAMILY MEMBER (PED):12801} for well child visit.

## FAMILY PROFILE AND HEALTH:

Has there been a change in household since last visit? {YES/NO:13707}  
Child lives with:  
{FAMILY MEMBER (PED):12801}  
Total number of adults in home:{NUMBERS:10700}  
Total number of children living in home:{NUMBERS:10700}  
Primary caretaker for this child:{FAMILY MEMBER (PED):12801}  
Does child attend daycare?{YES/NO:11446}  
Family concerns or problems: None

## NUTRITION

Problems: \*\*\*

Usual Servings Per Day:

Age appropriate diet, servings from all food groups daily  
Dairy, including milk: {Servings Per Day:11231}; {TYPES MILK:12326}  
Juice: {Servings Per Day:11231}

WIC: {YES/NO:63} Vitamins: {YES/NO:63} Fluoride: {YES/NO:63}

## DEVELOPMENTAL:

DEVELOPMENTAL SCREENING:

Parent's concerns, if any: \*\*\*

Was a Standardized Developmental Screening Tool used at encounter:

{PD MED HOME DEVELOPMENTAL TOOLS TO 18 MONTHS:12832}

Results of Developmental Screening: {PD MED HOME DEVELOPMENTAL SCREENING RESULTS:50015:"Normal"}

## AUTISM SCREENING:

{Screening by completion of the M-CHAT smart form is: if not completed at 18, 24, or 30 months or with parent concern}

Results of M-CHAT screening: {PD MED HOME RESULTS OF M-CHAT:50018}

## MENTAL HEALTH:

{Screening by completion of TDH Mental Health attached to SmartSet}

Results of Mental Health Screening: {PD MED HOME HEALTH SCREENING RESULTS:50016:"Normal"}

## CHILD'S HEALTH

Does the systems review note any problems or parr {Yes/No:11180}

Constitutional: {16023}

Eyes: {16024}

Ears, nose, mouth, throat, and face: {16025}

Respiratory: {16026}

Cardiovascular: {16027}

Gastrointestinal: {16028}

Genitourinary:{16029}

Hematologic/lymphatic: {16031}

Musculoskeletal:{16032}

Neurological: {16033}

Behavioral/Psych: {16034}

Endocrine: {16035}

Allergic/Immunologic: {16036}

Major illness, injury, hospitalization, surgery (since last visit): {Yes/No:11180} See pediatric history.

Dental care:

Has seen a dentist: {IF YES/WHEN:13713}

Was dental varnish applied:{YES/NO/UTD:12832}

## PHYSICAL EXAMINATION

Pulse 100 | Temp 98.7 °F (37.1 °C) | Resp 22 | Ht: 22.2 lb 0.7 oz (10 kg) | BMI 16.87 kg/m<sup>2</sup>

No blood pressure reading on file for this encounter. 43 %ile (Z= -0.19) based on WHO (Girls, 0-2 years) data using vitals from 12/4/2017.

10 %ile (Z= -1.28) based on WHO (Girls, 0-2 years) data using vitals from 12/4/2017.

79 %ile (Z= 0.80) based on WHO (Girls, 0-2 years) data using vitals from 12/4/2017.

## Physical Exam:

General Appearance: {appearance:10509}

Skin: {skin:10034}

Head: {head:10749}

Eyes: {eyes:10733}

Ears: {ears:10055}

Nose/Sinuses: {nose:10750}

Oropharynx: {O/P:10751}

Neck: {neck:10046}

Back: {back:11829}

Lungs: {lungs:11833}

Heart: {heart:11839}

Breast: {breast:10788}

Abdomen: {abdomen:11851}

Extremities: {extremities:11847}

Peripheral Pulses: {pulses:12227}

Neurologic: {neuro:12215}

Female Genitalia: {Pelvic:12226}

ASSESSMENT: {PD MED HOME TDH ASSESSMENT:50014}

## HEALTH EDUCATION / ANTICIPATORY GUIDANCE

### INJURY PREVENTION

Discussed the following injury prevention topics with parent/guardian, who verbalizes understanding of counseling.  
Car safety restraints, Choking, unsafe toys, Poisoning, including lead, Burns, Water safety/temp, Outdoor safety, Supervised play, Electrical safety, Injury and Passive smoking

### BEHAVIOR

Discussed the following behavioral topics with parent/guardian, who verbalizes understanding of counseling.  
Parent/Infant interaction, Social interaction, Read to your child, TV, Set limits, Sibling rivalry and Toilet training

### NUTRITION

Discussed the following nutrition topics with parent/guardian, who verbalizes understanding of counseling.  
Healthy diet/snacks, Iron rich foods, Physical activity, Weaning, bottle by age 1

Discussed the following behavioral topics with parent/guardian, who verbalizes understanding of counseling.  
Parent/Infant interaction, Social interaction, Read to your child, Limit TV, Set limits, Sibling rivalry and Toilet training

### NUTRITION

Discussed the following nutrition topics with parent/guardian, who verbalizes understanding of counseling.  
Healthy diet/snacks, Iron rich foods, Physical activity, Weaning and Off bottle by age 1

### HEALTH PROMOTION

Discussed the following health promotion topics with parent/guardian, who verbalizes understanding of counseling.  
Immunizations, Lead poisoning risks, Smoking in home, Well-child care, Dental care, appt., Family planning/folic acid, Daycare and # for Ask a Nurse

Plan:

- 1) WIC: {WIC REFERRAL:12705}
- 2) Immunizations: {IMMUNIZATION STATUS:5306}
- 3) Screening tests:
  - Hgb or Hct: {YES/NO/UTD:12832}
  - Lead screening: {YES/NO/UTD:12832}
  - PPD: {YES/NO:10400}
- 4) Dental Referral Made: {YES/NO/UTD:12832}
- 5) Referral to ECI indicated: {YES/NO:10400}
- 6) Reach Out and Read Book Given: {YES/NO:10400}
- 7) The medication reconciliation form and after visit summary was given to the patient's parent/guardian. Parent/guardian verbalizes understanding of instructions given.
- 8) Patient/guardian was engaged in plan of care and encouraged to continue to be actively involved in their own care to improve safety. Handouts given in {LANGUAGE HANDOUTS:15155}
- 9) Follow-up visit in 6 months for 2 yr checkup.

# I. The Problem cont.

## 1. Process & Documentation Cost

Case Presentation: Well Child	<u>18 months &amp; 1 year</u>
A. Number of visits per year:	21,845
B. Screen Turns/ Mouse Clicks:	154 total
*Includes blanks that need to have information typed	
C. Given 2 seconds per click:	5.13 mins/visit
D. APP pay range:	\$69.99/hr. - \$82.56/hr. (salary/fringe + 18% overhead)
E. Total APP labor cost per visit:	\$6.00 - \$7.08/visit
F. <b>ANNUAL APP COST:</b>	<b>\$131,070 to \$154,662</b>
G. Physician pay range:	\$118.10/hr. - \$139.20/hr. (salary/fringe + 18% overhead)
H. Total Physician labor cost per visit:	\$10.11 - \$11.90/visit
I. <b>ANNUAL PHYSICIAN COST:</b>	<b>\$220,852 to \$259,955</b>

# I. The Problem cont.

## Case Presentation: Well Child

16 year old

- A. Number of visits per year: 14,222
- B. Given 2 seconds per click: 8.47 mins/visit
- C. Screen Turns/ Mouse Clicks: 254 total
- \*Includes blanks that need to have information typed
- D. APP pay range: \$69.99/hr - \$82.56/hr  
(salary/fringe + 18% overhead)
- E. Total APP labor cost per visit: \$9.91 to \$11.69 /  
visit
- F. **ANNUAL APP COST: \$140,940 to \$166,255**
- G. Physician pay range: \$118.10/hr to \$139.20/hr  
(salary/fringe + 18% overhead)
- H. Total Physician labor cost per visit: \$16.69 to \$19.65 per  
visit
- I. **ANNUAL PHYSICIAN COST: \$237,365 to \$279,462**

# II. Solution:

## 1. Reduce cognitive load

The screenshot displays a medical software interface with a sidebar on the left and a main content area on the right. The sidebar includes navigation options like 'Chart Review', 'Rooming', 'Documentation...', 'Notes', 'Order Entry', 'Plan', 'Wrap-Up', 'Communications', 'Sign Visit', 'Care Teams', and 'SmartSet'. The main content area is divided into several sections:

- Rooming:** Shows 'Visit Information' with a table of recent visits. The table has columns for 'Reason for Visit', 'Recent Visits with Hanfling, Marcus J, MD', and 'Primary Dx'.

Reason for Visit	Recent Visits with Hanfling, Marcus J, MD	Primary Dx
None	04/14/2016 Encounter for routine child h with abnormal findings	
- Vital Signs:** Shows 'New Set of Vitals' with 'None Taken'.
- Pain Assessment:** Shows 'New Reading' with 'No data found'.
- Allergies/Contraindications:** Shows 'No Known Allergies' with a 'Display Hidden Allergies/Contraindications' button.
- Medications:** Shows a table of active medications.

Medication	Active?	Last Dose	Start Date	End D
Cholecalciferol, Vitamin D3, (BABY VITAMIN D3) 400 unit/drop Drop		Taking	--	--

The right-hand pane contains several sections for clinical guidance and consent management:

- BestPractice Advisories:** A yellow warning box states 'These vaccines are due or overdue: This SmartSet cannot be opened because it is already open. Suggested SmartSet: Please select: preview'. Below it is an 'Accept' button.
- VFC Contraindications Checklist:** Shows 'No data found'.
- ImmTrac Consent:** Includes a table for consent management with columns for 'Consent Type', 'Consent for', 'Signature Status', 'Provider', and 'Received'. It also shows an 'Unattached Documents' section with an 'Attach' button and a document entry for 'E-Sig Pedi ImmTrac Consent (English)'.
- ImmTrac Link:** Provides a URL: <https://www.immtrac.tdh.state.tx.us/>
- VFC Consents:** Shows 'No documents found' and a prompt to 'Use the buttons above to create a document'.
- Immunizations:** Includes a 'Go to Immunizations activity' link.

# II. Solution cont.

## 2. Streamline Processes

Please select 🔍

▼ Suggestions

PD Well Child Orders (Birth - 6yrs) 🔍

PEDI SICK VISIT / CATCH UP IMMUNIZATIONS 0 MOS- 6 YRS 🔍

SBC\_NURS\_DOCUMENTATION 🔍

Right click on a SmartSet to add to favorites. ✔ Open SmartSets ✖ Clear Selection

**Opened SmartSets**

Associate Primary Dx New Dx Providers Next

Pharmacy ✖ Remove Pend ✔ Sign

▼ Please select: Add Order

*From BestPractice:* These vaccines are due or overdue:

▼ **Orders for vaccines due or overdue**

- ▶ Hep A 0 of 2 selected
- ▶ Hep B 0 of 2 selected
- ▶ Hib 0 of 2 selected
- ▶ Meningococcal C/Y - Hib 0 of 1 selected
- ▼ PCV
  - ✔ PCV 13 <PREVNAR 13> Routine, Qty-1
- ▶ MMR 0 of 1 selected
- ▶ Varicella 0 of 1 selected
- ▼ MMR - Varicella
  - ✔ MMR-VARICELLA <PROQUAD> Routine, Qty-1
- ▶ Influenza 0 of 3 selected
- ▶ Diagnosis for vaccine orders 1 of 1 selected
  - ✔ Encounter for vaccination [Z23] edit

▼ **Nursing Immunization Note** 0 of 1 selected

- ▶ Nursing Immunization Note

▼ **Ad-hoc Orders** Add Order

Click the Add Order button to add an order in this section

Associate Primary Dx New Dx Providers Next

Pharmacy ✖ Remove Pend ✔ Sign

⌂ Restore  Close F9 ⬆ Previous F7 ⬇ Next F8

# II. Solution cont...

## 3. Provide safe, efficient care

1/9/2017 visit with McGee, Lindy U, MD for OPEN ACCESS PEDI RETURN - Blister on head area, F/u Cold & cough

Documentation by Age

- Birth History
- Child Abuse Scree...
- MCHAT
- PEDS Response F...

**Pediatric Birth History** [click to open](#)  
 New Reading [Go to Doc Flowsheets](#)  
 Appointment from 1/9/2017 in PA Pediatrics  
 01/09/17

**Child Abuse Screening** [click to open](#)  
 New Reading [Go to Doc Flowsheets](#)  
 Appointment from 1/9/2017 in PA Pediatrics  
 01/09/17

**MCHAT** [click to open](#)  
 New Reading [Go to Doc Flowsheets](#)  
 Appointment from 1/9/2017 in PA Pediatrics  
 01/09/17

**PEDS Response Form** [click to open](#)  
 New Reading [Go to Doc Flowsheets](#)  
 Appointment from 1/9/2017 in PA Pediatrics  
 01/09/17

Stroke Assessment | **TB Child Screening** | TB Child Screening

Appointment from 1/9/2017 in PA Pediatri...		01/09/17
1/9/17		
<b>TB Child Screening</b>		
Has your child been tested for TB?	<input type="text"/>	
Have you ever been told that your child had a positive TB skin test?	<input type="text"/>	
Has your child ever had any weight loss, a bad cough (lasting over two weeks), or coughing up blood or	<input type="text"/>	
Has your child been around anyone sick with TB?	<input type="text"/>	
Was your child born in another part of the world like Mexico or Latin America, the Caribbean, Africa,	<input type="text"/>	
Has your child been to Mexico or any other country in Latin America, the Caribbean, Africa, Eastern	<input type="text"/>	
Has your child spent time (> 3wks) with anyone who uses needles for drug use?	<input type="text"/>	
Has your child spent time (> 3wks) with anyone who has AIDS?	<input type="text"/>	
Has your child spent time (> 3wks) with anyone who was or is in jail or prison?	<input type="text"/>	
Has your child spent time (> 3wks) with anyone who has just come to United States from another	<input type="text"/>	

01/09/17

**Has your child been tested for TB?** [↑](#) [↓](#)

Select Single Option: (F5)

YES (Indicate date in comment section)

NO

DONT KNOW

Comment (F6)

# II. Solution cont. : Providers

1. Click Reduction on all Provider notes
2. Family Profile & Health- build drop downs only if there are changes from previous visit
3. Review of Systems- using NoteWriter macros saves clicks
4. Physical Exam- using PE macros saves clicks
5. Assessment & Plan- fewer drop downs
6. Fewer “**hard stop**” drop downs

# III. ROI

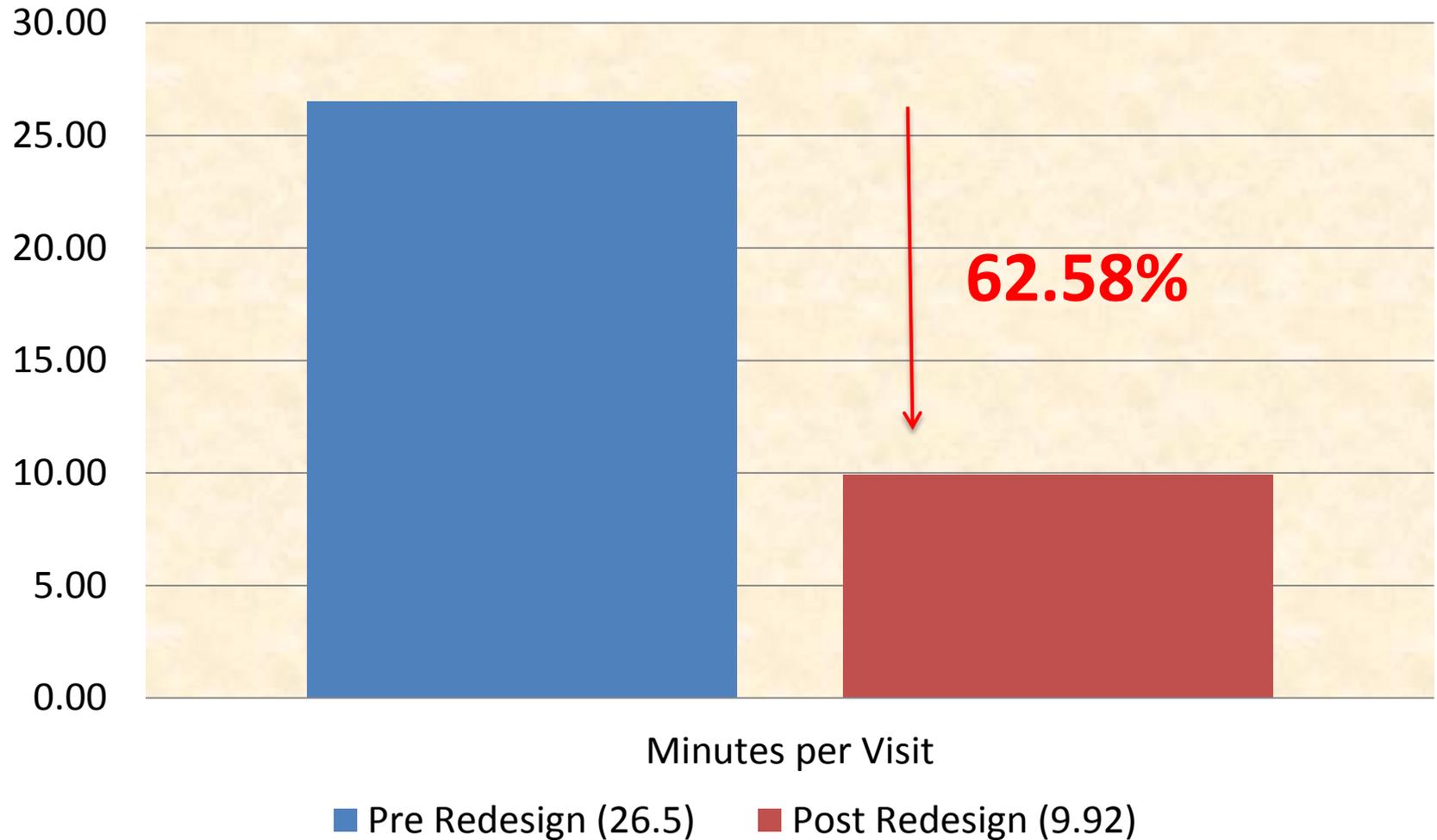
## Epic Pediatric Redesign Provider Documentation



	WC 18 months	WC 1 year	Adolescent
Documentation Pre	154	154	254
Documentation Post	73	68	143

# III. ROI: Nursing

## Documentation Time Per Visit



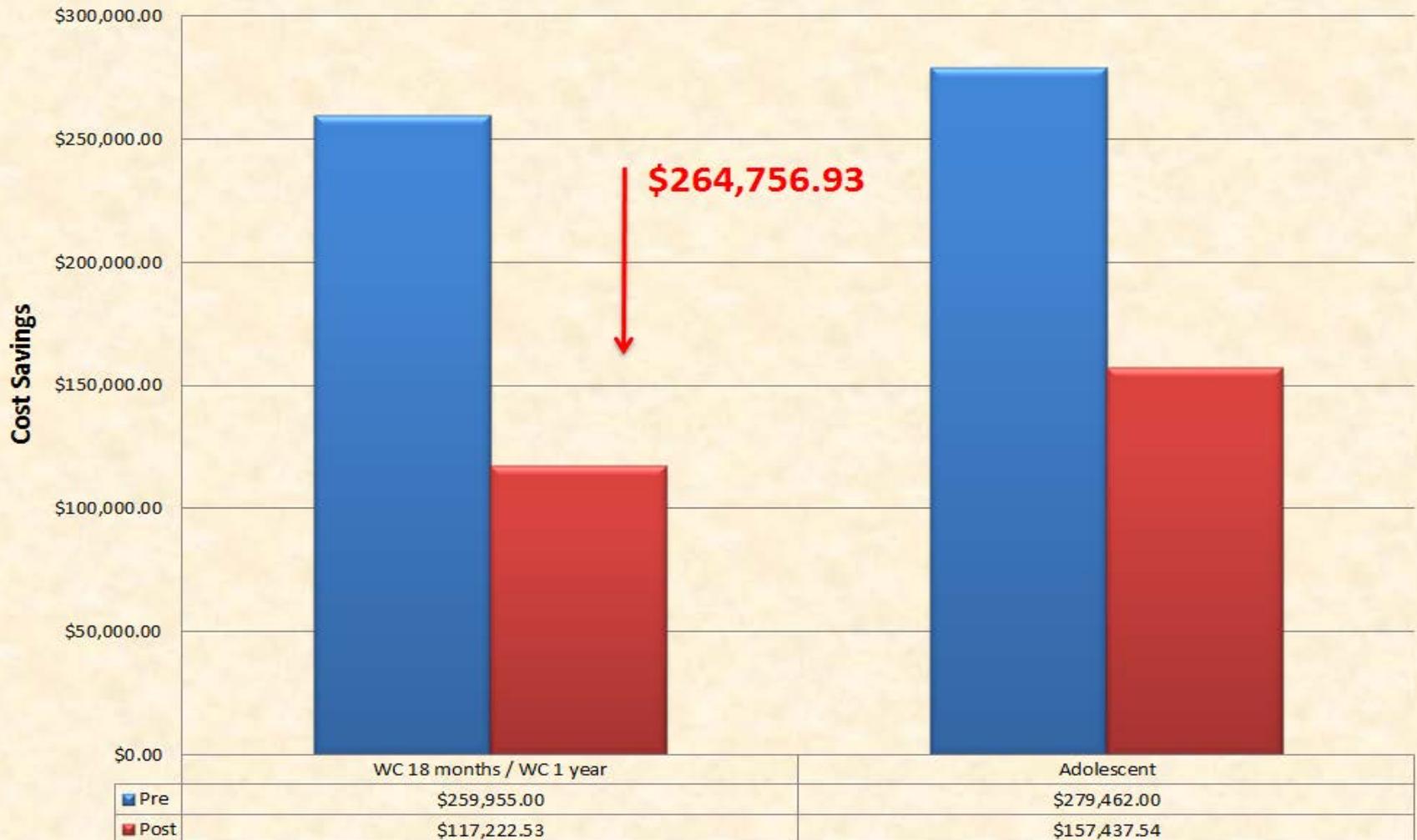
# III. ROI

## Epic Pediatric Redesign Advance Practice Professionals Return on Investment



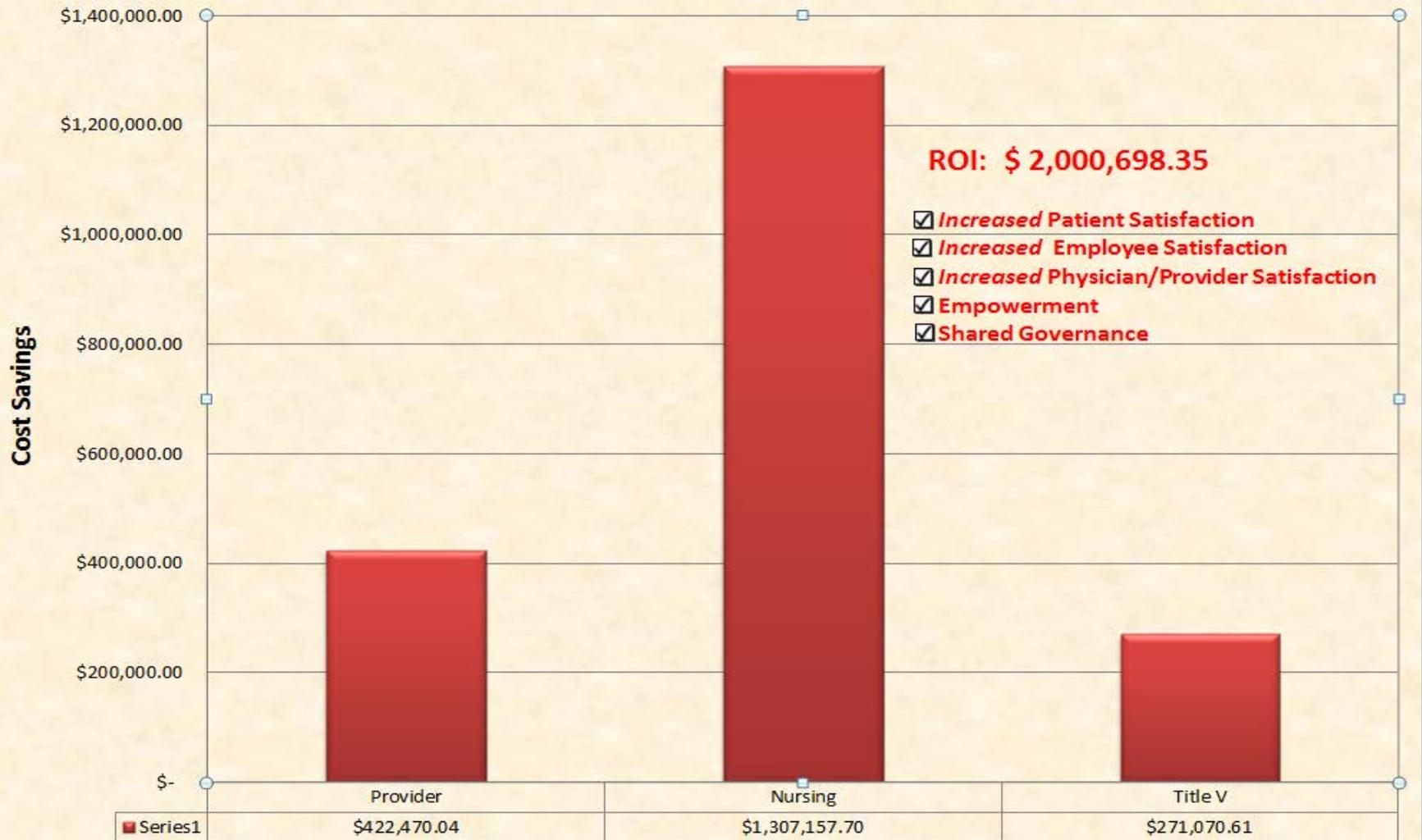
# III. ROI

### Epic Pediatric Redesign Physician: Return on Investment



# IV. Conclusion

### Epic Pediatric Redesign Overall Return on Investment



# Wall of Thanks!

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