# Quality Improvement

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# Problem Statement

UCLA Pediatric Dental Residents have insufficient time to complete dental encounter notes in between patients and often have multiple incomplete notes at the end of the clinic day. This not only leads to numerous incomplete encounters, but may also decrease the accuracy of the note’s content.

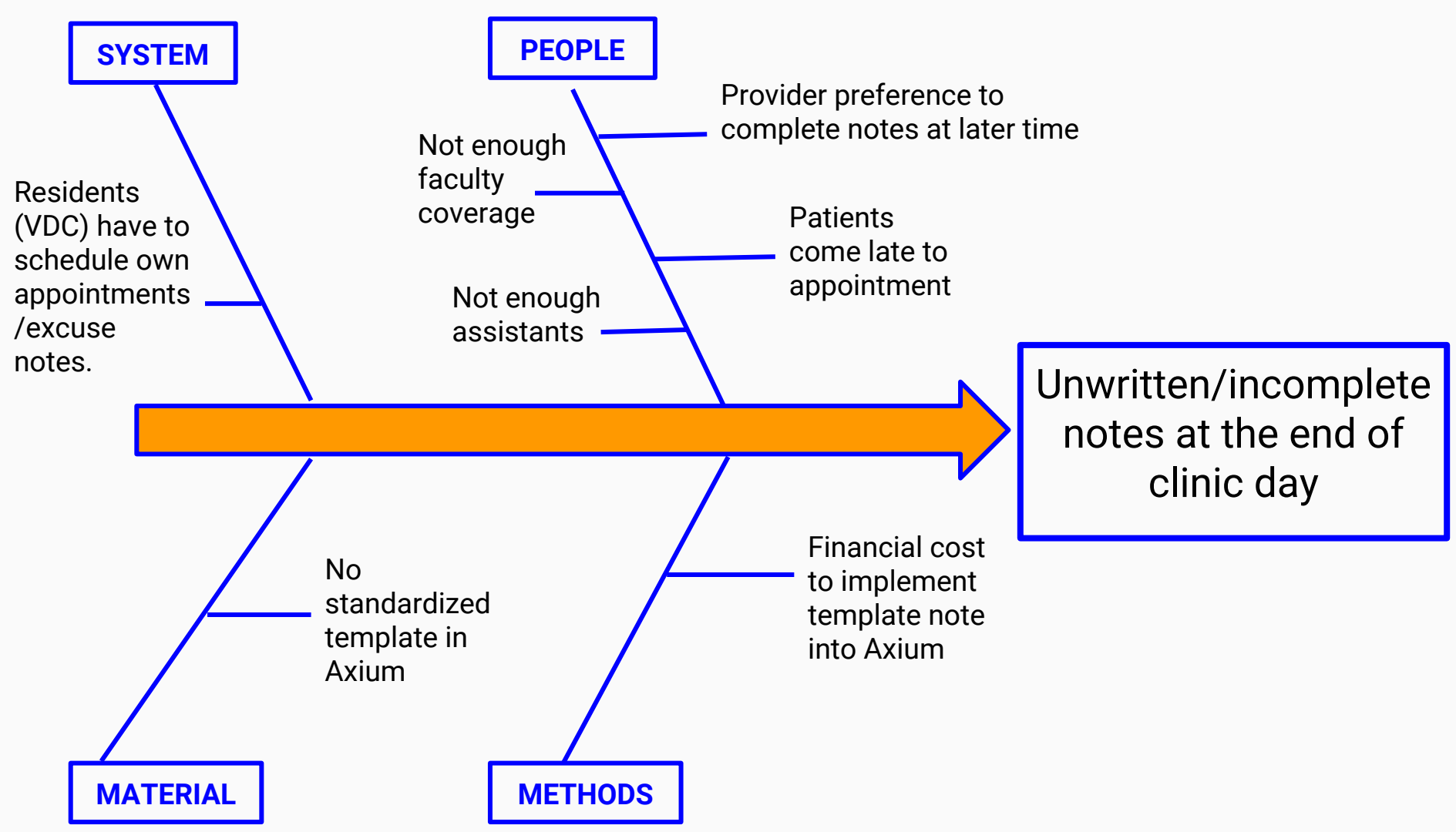
# The Aim

Create and implement a “Smart” note template on Axium for UCLA Pediatric Dental Residents that can increase the efficiency (measured as reduced time) and consistency (measured as accuracy) of dental encounter notes.

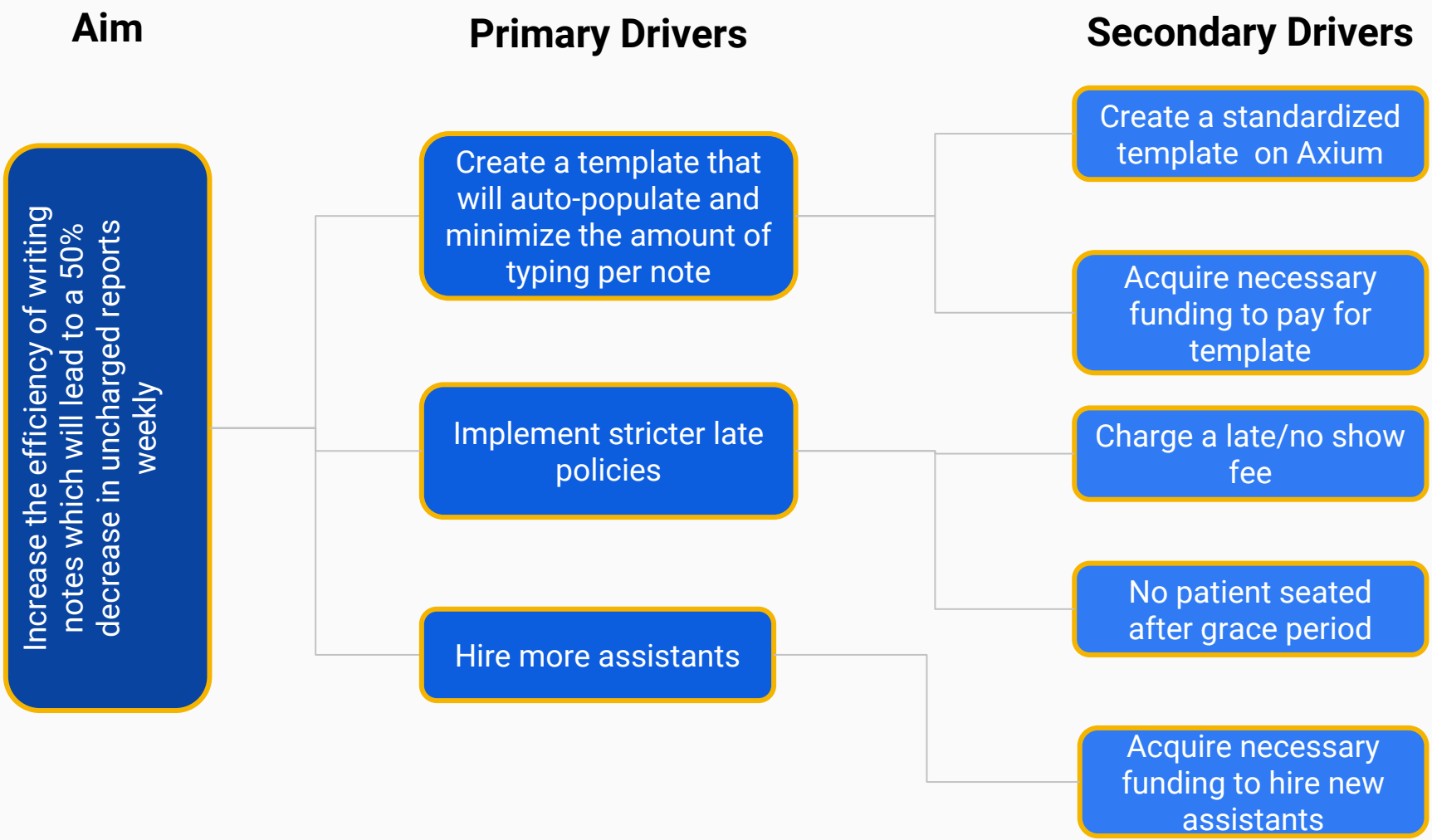
# The Goal

After 1 week of implementing the “smart” note, residents will be able to increase the overall efficiency (measured by  a decreased reported time of completion of notes in min/sec, reduced time between patient encounter and note completion) of encounter notes. We expect a subsequent decrease in the number of uncharged reports by 50%. This will be measured by the weekly “uncharged/missing” notes report.

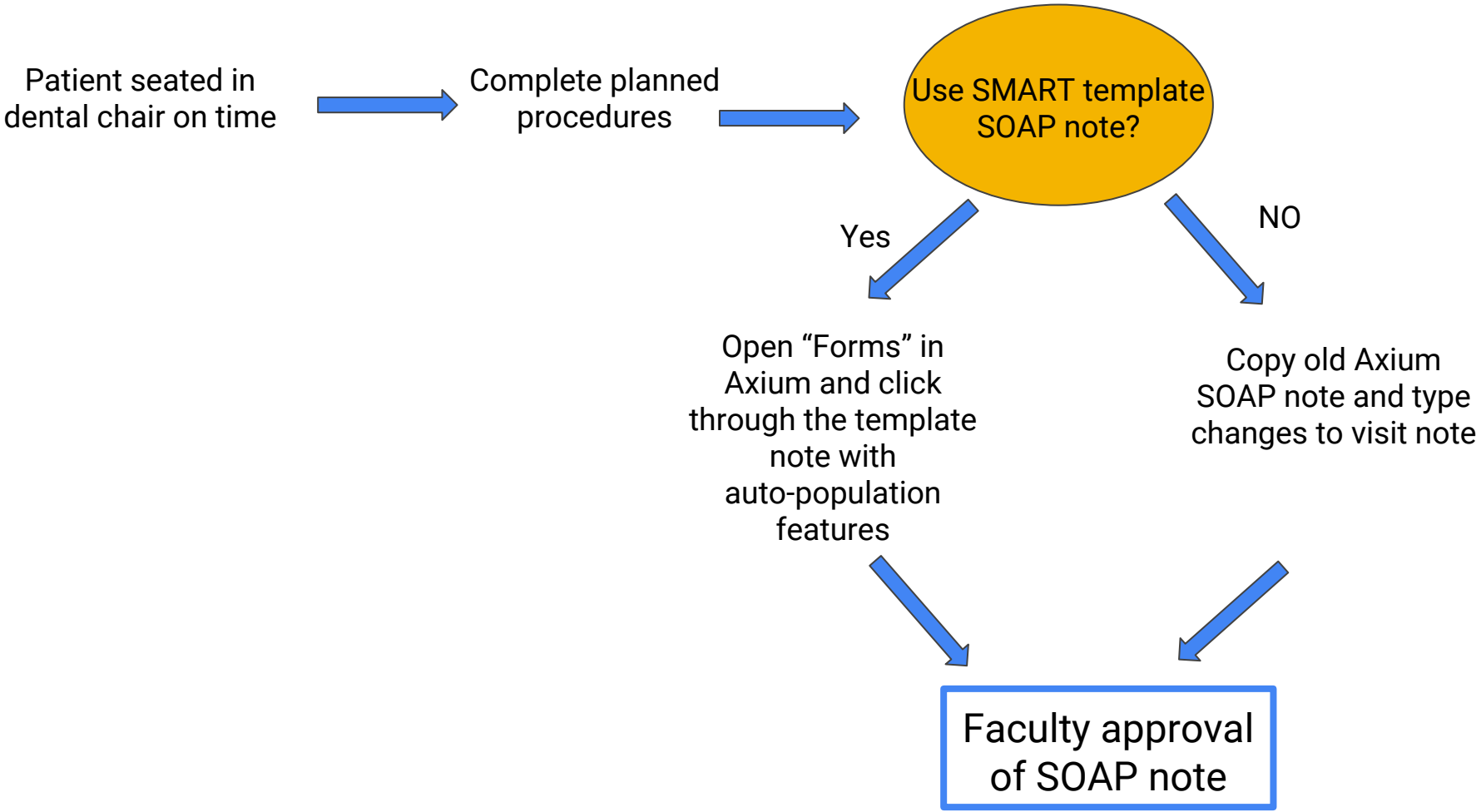
# Root Cause Analysis

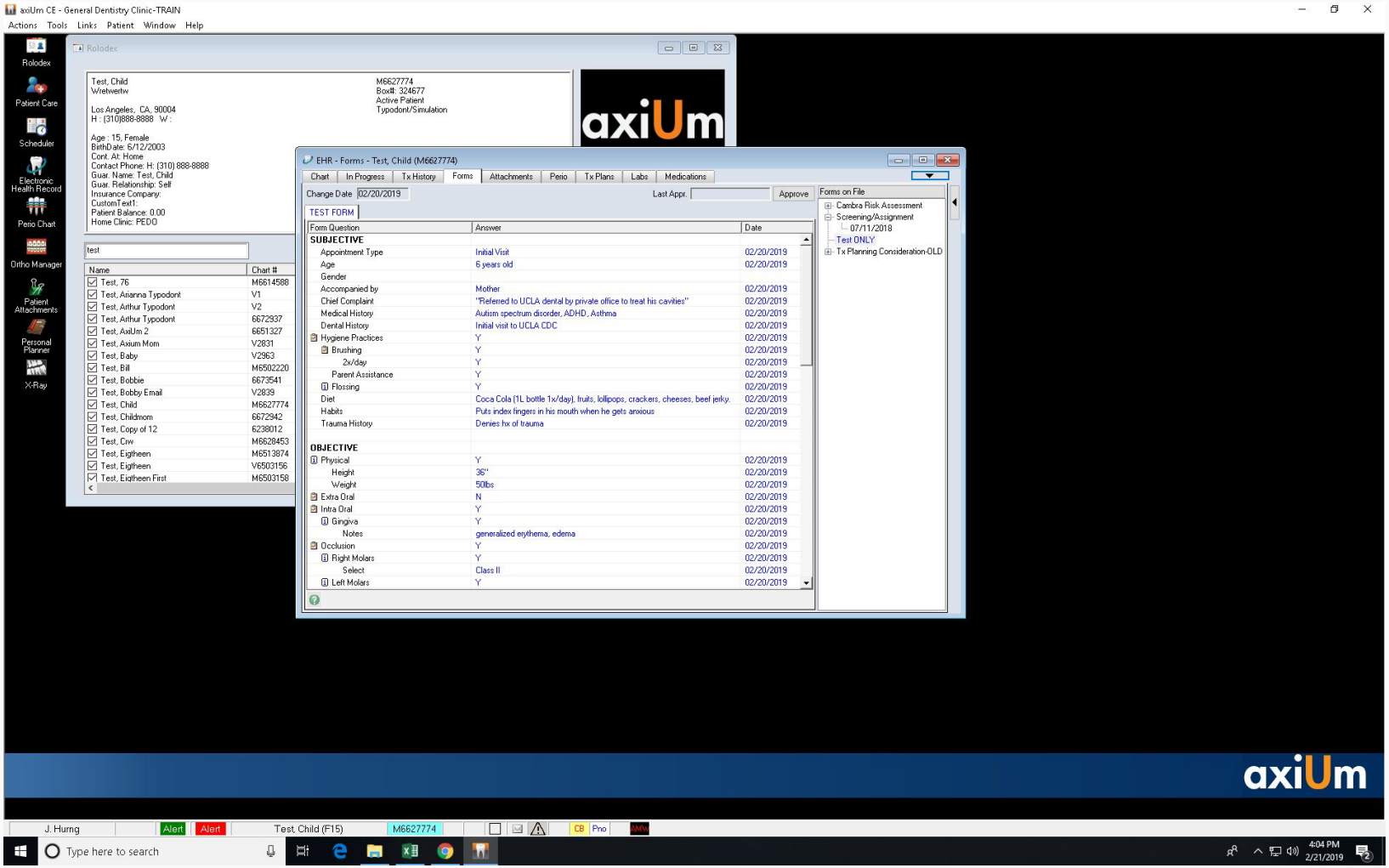

SYSTEM
PEOPLE
Provider preference to complete notes at later time
Not enough faculty coverage
Residents (VDC) have to schedule own appointments /excuse notes.
Patients come late to appointment
Not enough assistants
Unwritten/incomplete notes at the end of clinic day
No standardized template in Axium
Financial cost to implement template note into Axium
MATERIAL
METHODS

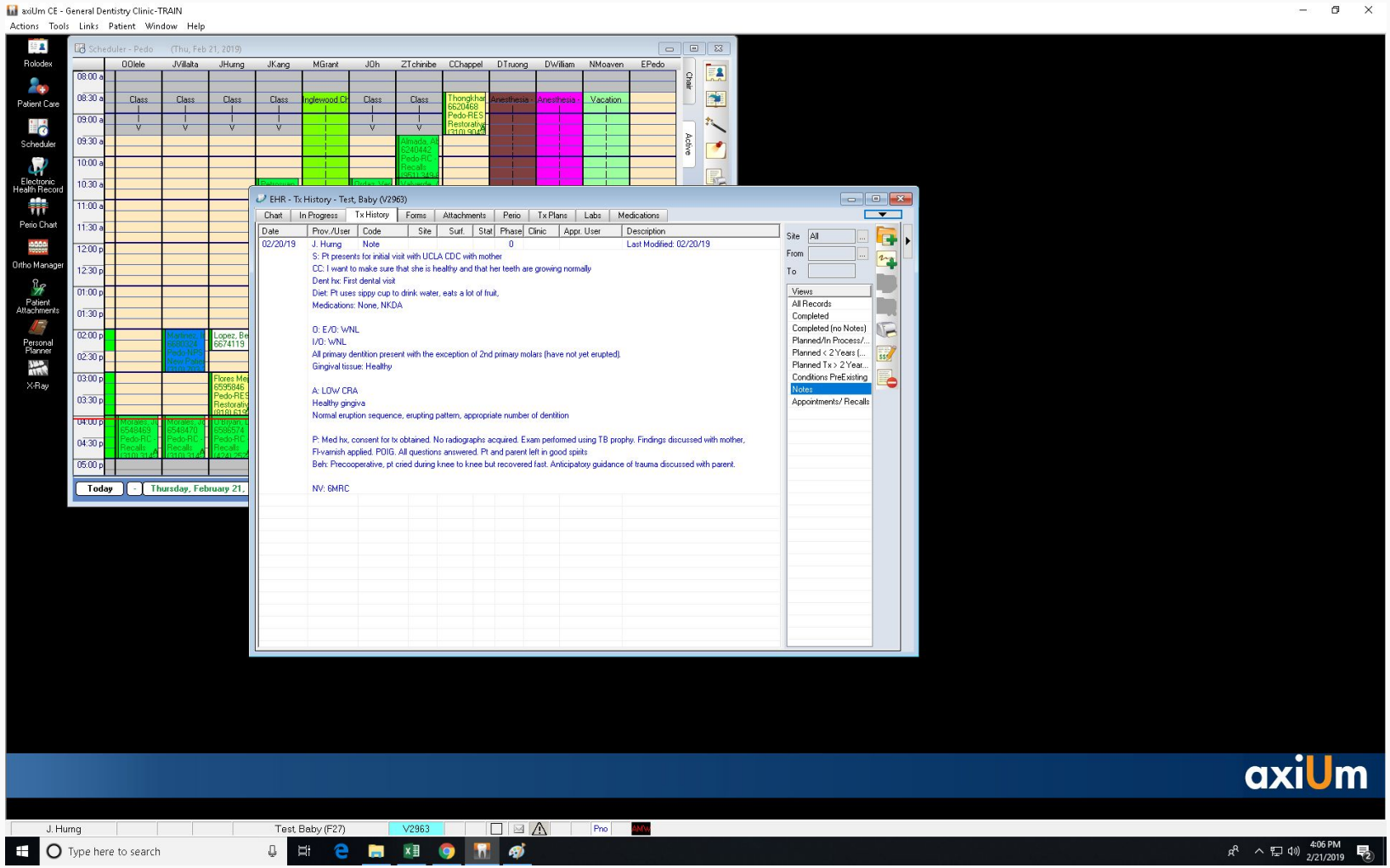
# Key Driver Diagram


Aim
Primary Drivers
Secondary Drivers
Increase the efficiency of writing notes which will lead to a 50% decrease in uncharged reports weekly
Create a template that will auto-populate and minimize the amount of typing per note
Implement stricter late policies
Hire more assistants
Create a standardized template on Axium
Acquire necessary funding to pay for template
Charge a late/no show fee
No patient seated after grace period
Acquire necessary funding to hire new assistants

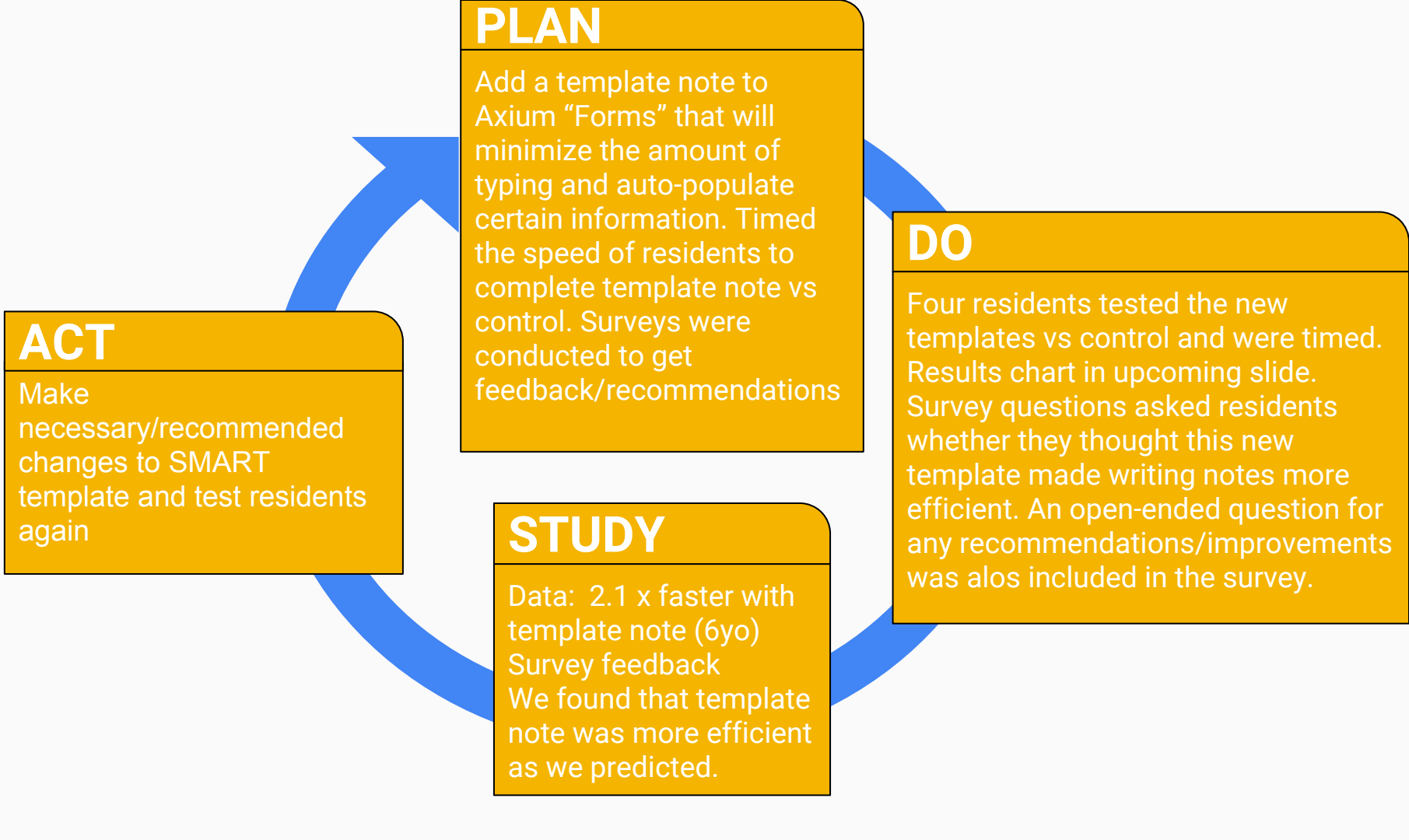
# Process Map


Patient seated in dental chair on time
Complete planned procedures
Use SMART template SOAP note?
Yes
NO
Open “Forms” in Axium and click through the template note with auto-population features
Copy old Axium SOAP note and type changes to visit note
Faculty approval of SOAP note


axiUm CE - General Dentistry Clinic-TRAIN
Actions Tools Links Patient Window Help
Rolodex
Patient Care
Scheduler
Electronic Health Record
Perio Chart
Ortho Manager
Patient Attachments
Personal Planner
X-Ray
Rolodex
Test, Child
Wretwetrw
Los Angeles, CA, 90004
H : (310)888-8888 W :
Age : 15, Female
BirthDate: 6/12/2003
Cont. At: Home
Contact Phone: H: (310) 888-8888
Guar. Name: Test, Child
Guar. Relationship: Self
Insurance Company:
CustomText1:
Patient Balance: 0.00
Home Clinic: PEDO
M6627774
Box#: 324677
Active Patient
Typodont/Simulation
axiUm
test
Name
Chart #
Test, 76 M6614588
Test, Arianna Typodont V1
Test, Arthur Typodont V2
Test, Arthur Typodont 6672937
Test, AxiUm 2 6651327
Test, Axium Mom V2831
Test, Baby V2963
Test, Bill M6502220
Test, Bobbie 6673541
Test, Bobby Email V2839
Test, Child M6627774
Test, Childmom 6672942
Test, Copy of 12 6238012
Test, Crw M6628453
Test, Eighteen M6513874
Test, Eighteen V6503156
Test, Eighteen First M6503158
EHR - Forms - Test, Child (M6627774)
Chart In Progress Tx History Forms Attachments Perio Tx Plans Labs Medications
Change Date 02/20/2019
Last Appr.
Approve
TEST FORM
Forms on File
Cambra Risk Assessment
Screening/Assignment
07/11/2018
Test ONLY
Tx Planning Consideration-OLD
Form Question
Answer
Date
SUBJECTIVE
Appointment Type Initial Visit 02/20/2019
Age 6 years old 02/20/2019
Gender
Accompanied by Mother 02/20/2019
Chief Complaint "Referred to UCLA dental by private office to treat his cavities" 02/20/2019
Medical History Autism spectrum disorder, ADHD, Asthma 02/20/2019
Dental History Initial visit to UCLA CDC 02/20/2019
Hygiene Practices Y 02/20/2019
Brushing Y 02/20/2019
2x/day Y 02/20/2019
Parent Assistance Y 02/20/2019
Flossing Y 02/20/2019
Diet Coca Cola (1L bottle 1x/day), fruits, lollipops, crackers, cheeses, beef jerky. 02/20/2019
Habits Puts index fingers in his mouth when he gets anxious 02/20/2019
Trauma History Denies hx of trauma 02/20/2019
OBJECTIVE
Physical Y 02/20/2019
Height 36" 02/20/2019
Weight 50lbs 02/20/2019
Extra Oral N 02/20/2019
Intra Oral Y 02/20/2019
Gingiva Y 02/20/2019
Notes generalized erythema, edema 02/20/2019
Occlusion Y 02/20/2019
Right Molars Y 02/20/2019
Select Class II 02/20/2019
Left Molars Y 02/20/2019
axiUm
J. Hurng
Alert
Alert
Test, Child (F15)
M6627774
CB Pno
Type here to search
4:04 PM
2/21/2019


axiUm CE - General Dentistry Clinic-TRAIN
Actions Tools Links Patient Window Help
Rolodex
Patient Care
Scheduler
Electronic Health Record
Perio Chart
Ortho Manager
Patient Attachments
Personal Planner
X-Ray
Scheduler - Pedo (Thu, Feb 21, 2019)
DOlele JVillalta JHurng JKang MGrant JOh ZTchinibe CChappel DTruong DWilliam NMoaven EPedo
Class
Inglewood Cl
Thongkhar 6620468 Pedo-RES Restorativ
Anesthesia -
Vacation
Today
Thursday, February 21,
EHR - Tx History - Test, Baby (V2963)
Chart In Progress Tx History Forms Attachments Perio Tx Plans Labs Medications
Date Prov./User Code Site Surf. Stat Phase Clinic Appr. User Description
02/20/19 J. Hurng Note 0 Last Modified: 02/20/19
S: Pt presents for initial visit with UCLA CDC with mother
CC: I want to make sure that she is healthy and that her teeth are growing normally
Dent hx: First dental visit
Diet: Pt uses sippy cup to drink water, eats a lot of fruit,
Medications: None, NKDA
O: E/O: WNL
I/O: WNL
All primary dentition present with the exception of 2nd primary molars (have not yet erupted).
Gingival tissue: Healthy
A: LOW CRA
Healthy gingiva
Normal eruption sequence, erupting pattern, appropriate number of dentition
P: Med hx, consent for tx obtained. No radiographs acquired. Exam performed using TB prophy. Findings discussed with mother,
Fl-varnish applied. POIG. All questions answered. Pt and parent left in good spirits
Beh: Precooperative, pt cried during knee to knee but recovered fast. Anticipatory guidance of trauma discussed with parent.
NV: 6MRC
Site All
From
To
Views
All Records
Completed
Completed (no Notes)
Planned/In Process/...
Planned < 2 Years (...
Planned Tx > 2 Year...
Conditions PreExisting
Notes
Appointments/ Recalls
axiUm
J. Hurng
Test, Baby (F27)
V2963
Pno
Type here to search
4:06 PM
2/21/2019

# PDSA Cycle


PLAN
Add a template note to Axium “Forms” that will minimize the amount of typing and auto-populate certain information. Timed the speed of residents to complete template note vs control. Surveys were conducted to get feedback/recommendations
DO
Four residents tested the new templates vs control and were timed. Results chart in upcoming slide. Survey questions asked residents whether they thought this new template made writing notes more efficient. An open-ended question for any recommendations/improvements was alos included in the survey.
STUDY
Data: 2.1 x faster with template note (6yo)
Survey feedback
We found that template note was more efficient as we predicted.
ACT
Make necessary/recommended changes to SMART template and test residents again

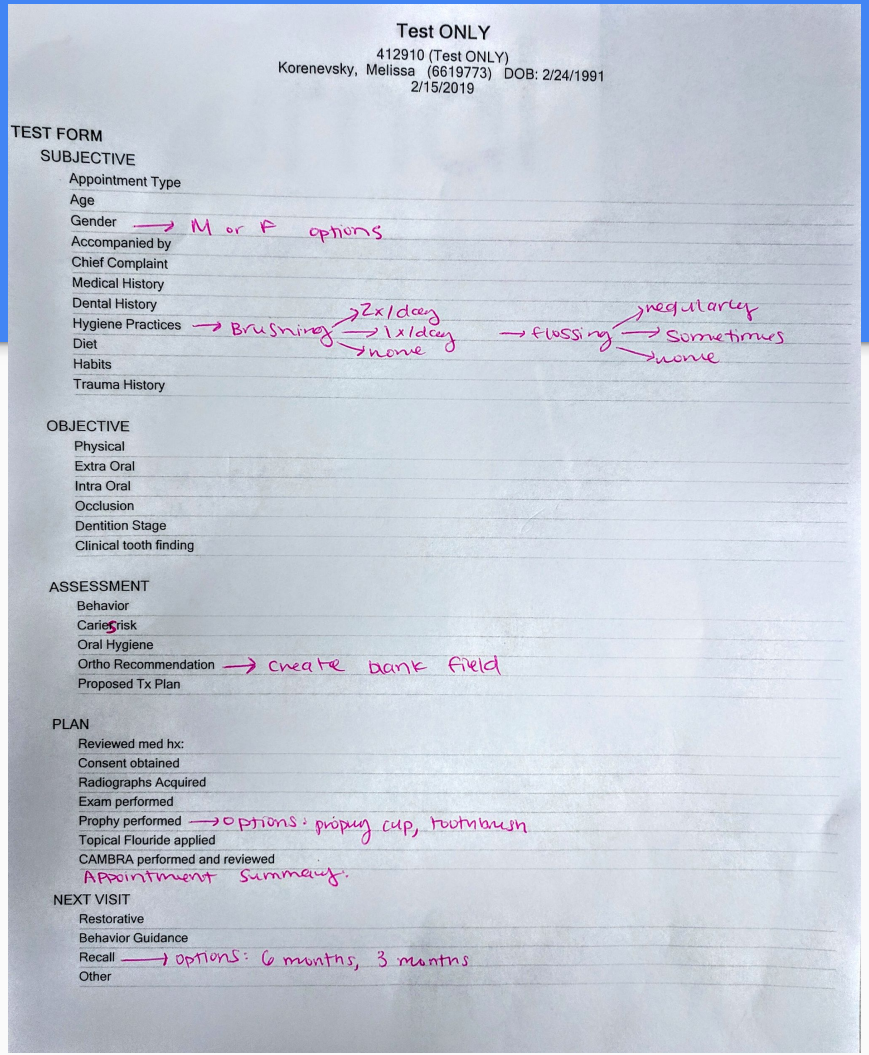
# Sample Cases

**Case 1:**
Healthy 2y6m female, initial visit, good hygiene, EOE/IOE WNL
Tx: Knee-to-knee exam, TB prophy, Fl varnish
Beh: Pre-cooperative

**Case 2:**
6y3m male, referred to UCLA CDC by private dental office to treat caries
Mhx: ADHD, Asthma, Autism (high functioning), enrolled in ABA therapy program. Meds: Albuterol PRN, Ritalin. Allergies: Seasonal, NKDA
DHx: Initial visit/consultation with UCLA for treatment of caries
Clinical findings: A (MO), B (DO), D-G WSL, I (DO), J (MO), K (MO), L (DO), S (DO), T (MO)
Tx: Prophy, COE, Fl-, 2BWX, 2 Occlusals
Beh: Frankl 3

# Implementing Changes

- Gender options
- Brushing/flossing frequency
- Ortho recommendations
- Prophy type
- Appointment summary
- Recall interval



Test ONLY

412910 (Test ONLY)
Korenevsky, Melissa (6619773) DOB: 2/24/1991
2/15/2019

TEST FORM

SUBJECTIVE
- Appointment Type
- Age
- Gender → M or F options
- Accompanied by
- Chief Complaint
- Medical History
- Dental History
- Hygiene Practices → Brushing → 2x/day, 1x/day, none → flossing → regularly, Sometimes, none
- Diet
- Habits
- Trauma History

OBJECTIVE
- Physical
- Extra Oral
- Intra Oral
- Occlusion
- Dentition Stage
- Clinical tooth finding

ASSESSMENT
- Behavior
- Caries risk
- Oral Hygiene
- Ortho Recommendation → create bank field
- Proposed Tx Plan

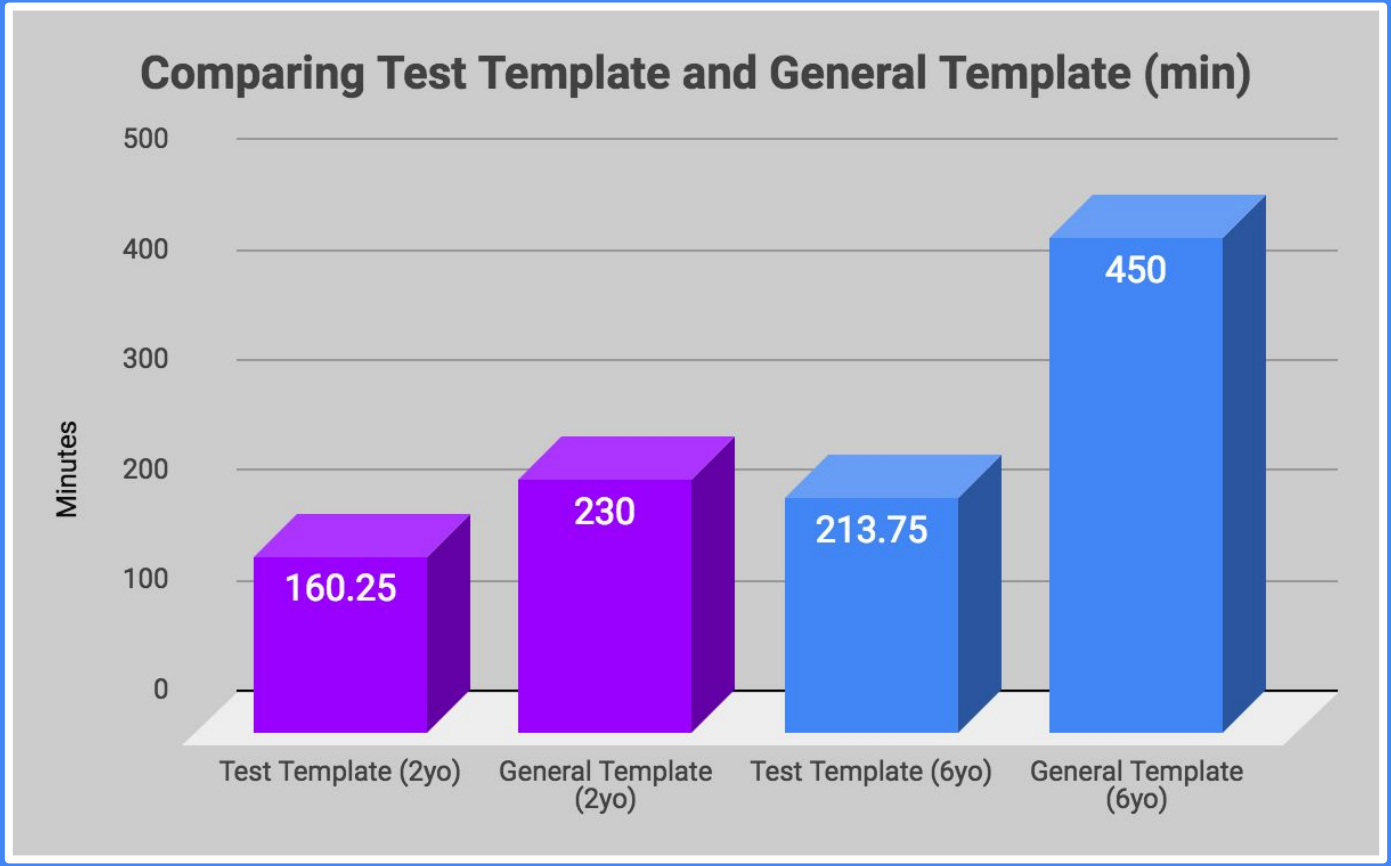
PLAN
- Reviewed med hx:
- Consent obtained
- Radiographs Acquired
- Exam performed
- Prophy performed → options: prophy cup, toothbrush
- Topical Flouride applied
- CAMBRA performed and reviewed

Appointment Summary.

NEXT VISIT
- Restorative
- Behavior Guidance
- Recall → options: 6 months, 3 months
- Other

# Final Results

| TEST TEMPLATE (2yo) | GEN. TEMPLATE (2yo) | TEST TEMPLATE (6yo) | GEN TEMPLATE (6yo) |
|---|---|---|---|
| 3 min 10 seconds | 4 min 13 seconds | 5 min 29 seconds | 9 min 54 seconds |
| 2 min 32 seconds | 3 min 16 seconds | 2 min 12 seconds | 5 min 04 seconds |
| 2 min 17 seconds | 4 min 55 seconds | 2 min 56 seconds | 10 min 45 seconds |
| 2 min 42 seconds | 2 min 56 seconds | 3 min 33 seconds | 4 min 53 seconds |


Comparing Test Template and General Template (min)
Minutes
500
400
300
200
100
0
160.25
230
213.75
450
Test Template (2yo)
General Template (2yo)
Test Template (6yo)
General Template (6yo)

# Survey & Feedback

- Initial explanation/training of different fields required
- “No answer” indicates WNL versus clicking into each field
- General ease of use
- Need for calculated fields
- Concern over using “forms” format instead of notes

# Final Thoughts

- Templated notes in current format appear to increase speed of completing notes, particularly for more complicated patients
- Resident surveys indicate generally positive experiences
- Use of calculated fields can further increase efficiency
- Consensus needed to determine if “forms” are suitable replacement for “notes”

# Thank you!