

AFHTO 2015 Conference:
Tools to enhance and track patient experience

EXTENDING THE EMR WITH PATIENT TABLETS

**Using Interactive, Point-of-Care Patient Surveys in the
Waiting Room to Generate Clinical Content and Save Time**

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North York
Family Health Team

PRESENTER DISCLOSURE

- **Presenters:**
- Dr. Doug Kavanagh
- Dr. Robert Davis

- **Relationships with commercial interests:**
 - Dr. Kavanagh: Medical Director and Co-Founder, CognisantMD Inc. (Ocean provider) – Shareholder
 - Dr. Davis: None

DISCLOSURE OF COMMERCIAL SUPPORT

- This program has not received any external financial support.
- This program has not received any in-kind support.
- **Potential for conflict(s) of interest:**
 - Doug Kavanagh has shares in CognisantMD, whose product Ocean is being discussed in this program.
 - CognisantMD developed, licenses, distributes, and benefits from the sale of a product that will be discussed in this program: Ocean.

MITIGATING POTENTIAL BIAS

- Direct references to commercial product names will be avoided when practical
- Presentation will focus on the general capabilities of questionnaire technology rather than specific product features

PAPER SURVEYS

In the year **2015**.....

- This is a common sight in a clinic!

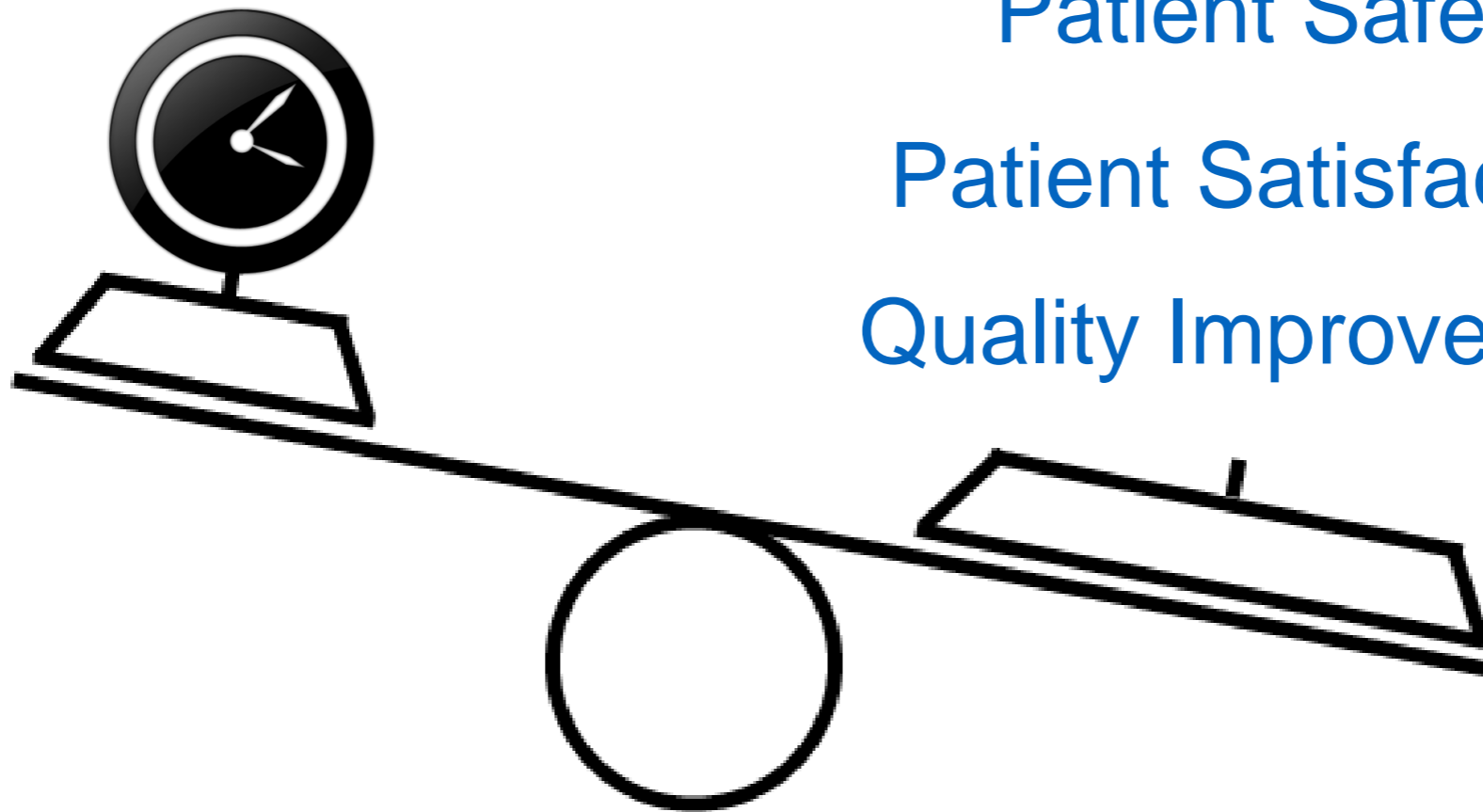


STILL STUCK IN THE PAPER AGE....

- Why do we still use paper questionnaires?
- Why don't we use standardized questionnaires more often?
(PHQ-9, GAD-7, NDDDS, etc.)
- Why do QI initiatives never seem to pass the “pilot” stage?

PROBLEM #1

Time



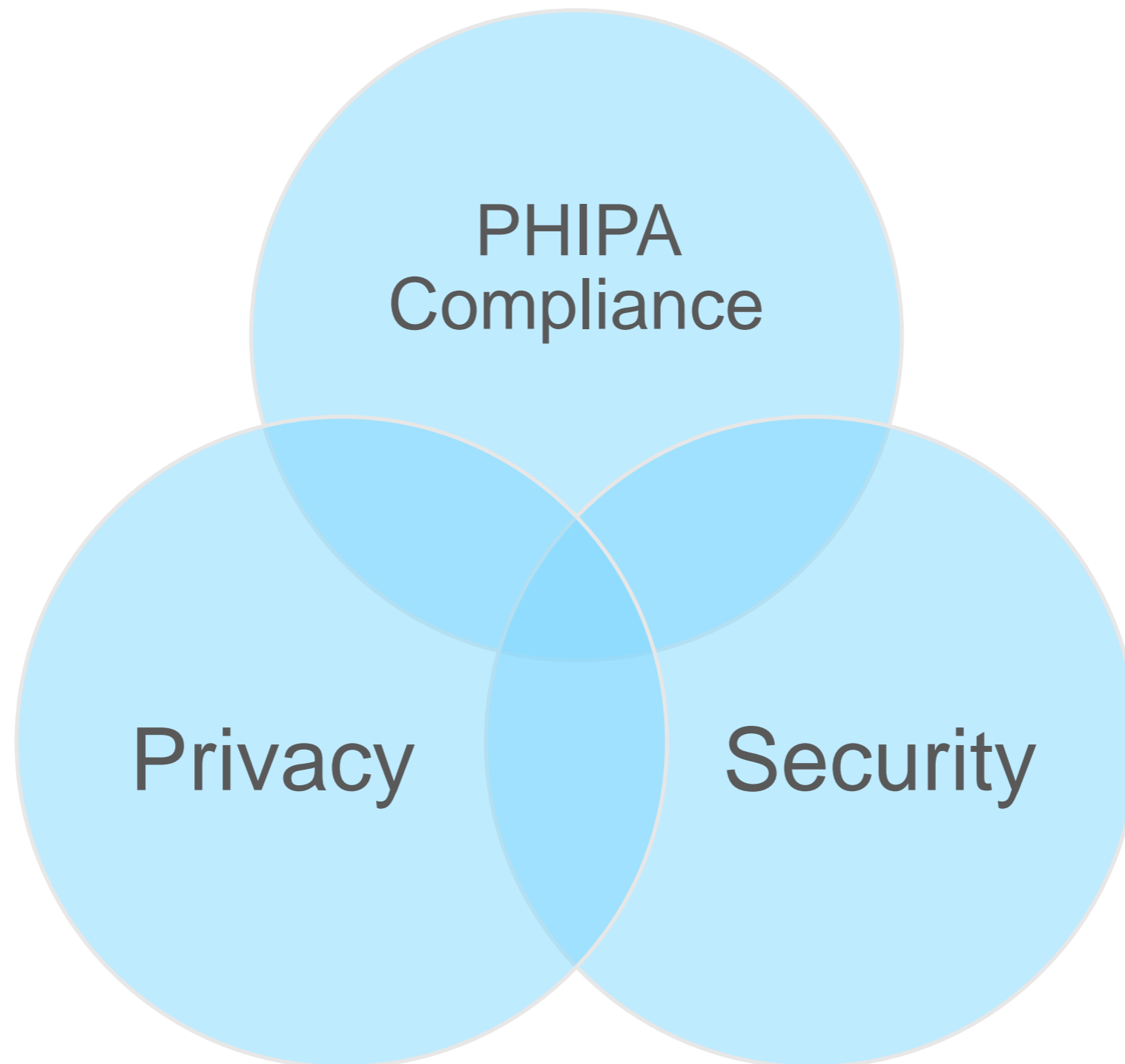
Clinical Research

Patient Safety

Patient Satisfaction

Quality Improvement

PROBLEM #2



PROBLEM #2



PHIPA Compliance:



~~Free Consumer
Survey Tools~~



~~Unsecured
Email~~



Client-Side Encryption



Pseudonymisation



Canadian Data Storage



Hospital Security Audits

PROBLEM #3

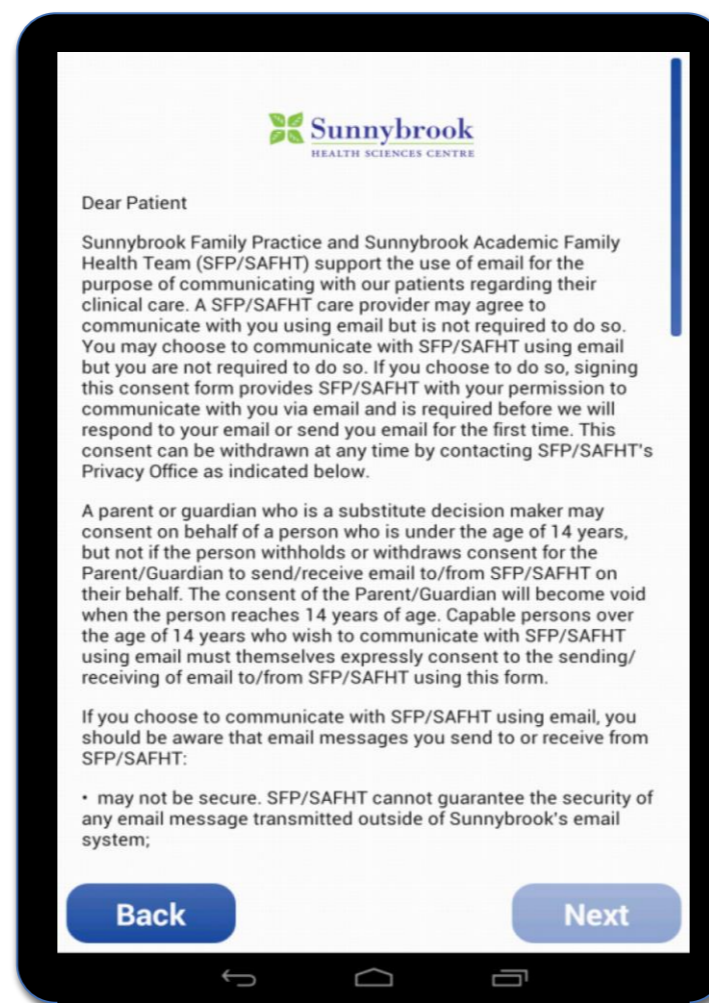
DISTRACTIONS

A man in a blue shirt is shown from the chest up, looking upwards with a stressed expression. He has his right hand on his forehead and his left hand resting on a stack of papers. He is surrounded by a massive, chaotic pile of papers and folders that fills the background and foreground, creating a sense of being overwhelmed. The scene is brightly lit, and the overall tone is one of frustration and distraction.

WHAT'S CHANGED?

Online Questionnaires

EMR



Tablet

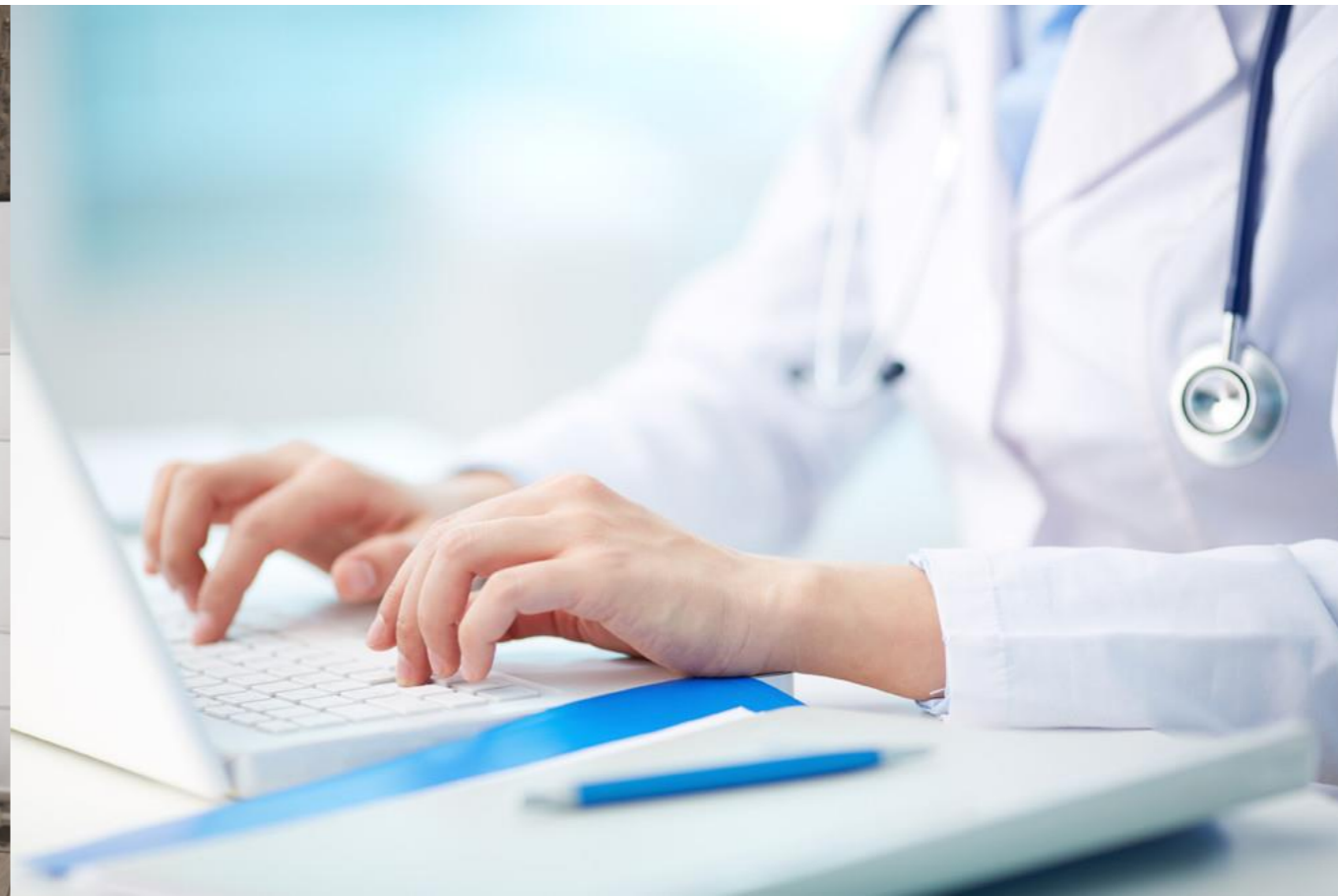
At home

Patient

In the clinic

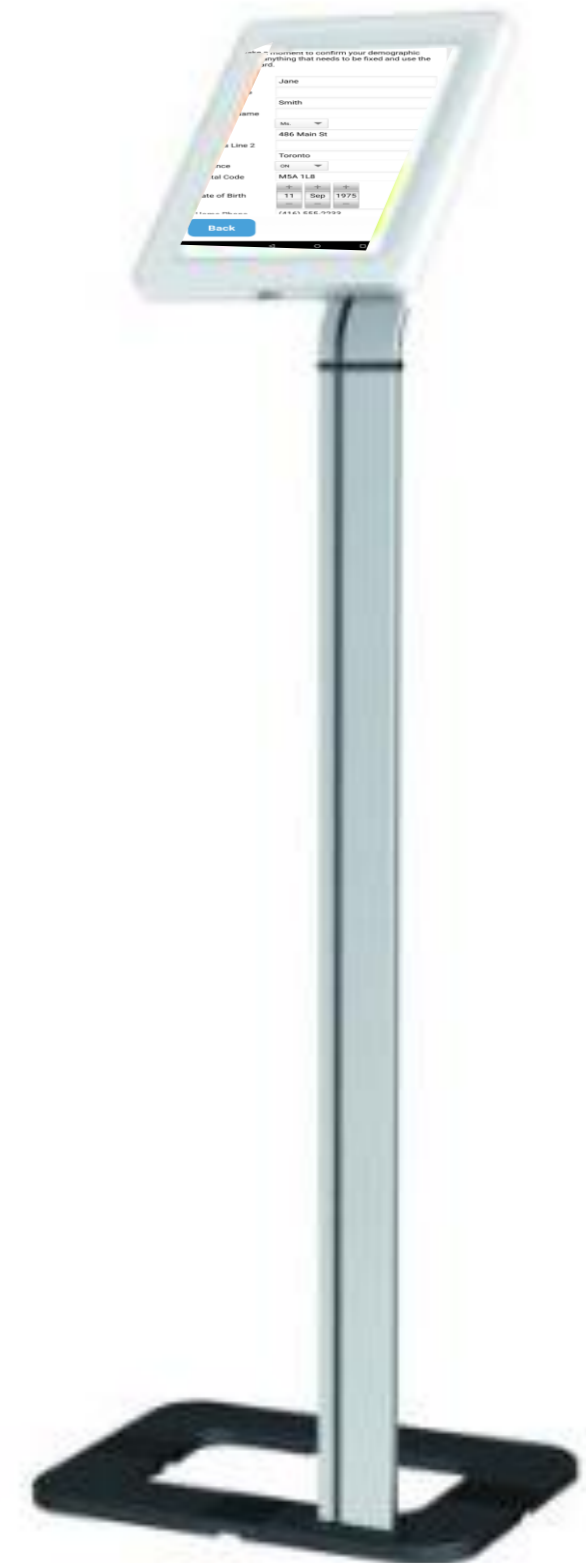
WAITING ROOM TABLET WORKFLOW

- Patient checks in with reception:
- Given tablet
- Forms shown automatically
- Answers stream into EMR for review and/or cross-site studies



KIOSK WORKFLOW

- Patient approaches waiting room kiosk
- Selects language
- Enters health number
- Forms shown automatically according to clinic rules
- Answers stream into EMR for review and/or cross-site study

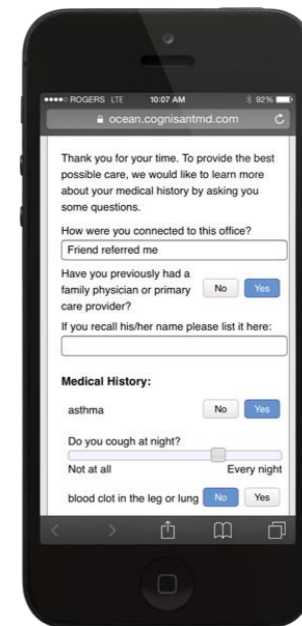


ONLINE QUESTIONNAIRE FLOW

- Administrative or clinical staff sends secure email link
- Patient completes questionnaire on:
 - Home computer
 - Smartphone / tablet
- Answers stream into EMR for review and/or cross-site study



EMR



Patient

CLINICIAN WORKFLOW: BEFORE SEEING THE PATIENT

NDDS 18 Month Screen

1. Identify pictures in a book (e.g. "Show me the baby")? **"No"**
2. Use a variety of familiar gestures? (waving, pushing, giving, reaching up)* **"Yes"**
3. Follow directions using "on" and "under"? ("put the cup on the table")* **"Yes"**
4. Make at least four different consonant sounds? (b, n, d, h, g, w)* **"No"**
5. Point to at least three different body parts when asked? (e.g. "Where is your nose?")* **"Yes"**
6. Say 20 or more words? (words do not have to be clear) **"Yes"**
7. Hold a cup to drink?*** **"Yes"**
8. Pick up and eat finger food? **"Yes"**
9. Help with dressing by putting out arms and legs?*** **"Yes"**
10. Walk up a few stairs holding your hand? **"Yes"**
11. Walk alone? **"Yes"**
12. Squat to pick up a toy and stand back up without falling? **"Yes"**
13. Push and pull toys or other objects while walking forward? **"Yes"**
14. Stack three or more blocks? **"Yes"**
15. Show affection towards people, pets, or toys? **"Yes"**
16. Point to show you something? **"Yes"**
17. Look at you when you are talking or play

Rourke Well Baby Visit

Age: 22 months

Education and Advice

Uses an industry-standard booster seat facing the rear.

Always wears a helmet when riding a tricycle/bicycle.

No firearm in the home.

No matches or lighters within child's reach.

Functioning carbon monoxide detector in the home.

Planning to enrol in swimming lessons.

No unsupervised pool in background or neighbourhood.

No alternative health treatments used.

No protection from malicious websites

Physical activity hours/day: **"5"**

Plays with other children most days of the week.

Wears sunscreen when outside.

Lives in house at risk for lead exposure.

Behaviour and Family Issues: Coping at home: **"Not well"**. Mood: **"Good"**.

Long-term partner. No family conflicts


Siblings not coping well with change.

ACCESS FROM MY EMR


Allergies	Immunizations	Personal Hx
Aeroallergen: Cat, Dog, cats, dogs	OPV (3) latest: Apr 20, 1992 HIB (2) latest: Jun 18, 1993 DPT (4) latest: Jun 18, 1993 MMR (2) latest: Feb 22, 1996 DPTP Feb 22, 1996 flu shot Oct 24, 2003 Td 2010	

Reminders	Risk Factors










Email consent: **Granted** - May 2, 2015 [Deny](#) [Grant](#) Email: dkavanagh@cognisantmd.com Next of Kin:

 [Import](#) [Lab Req](#) [SOAP](#) [BP](#) [Wt Ht](#) [HC BMI](#) [ODB](#) [Meds](#) [cma.ca](#) [Guidelines](#) [Google Images](#) [Map](#) [Dictate](#)

Oct 6, 2015 Ocean DGK

 **602** Connected to Ocean.

v2.74 NON-OBF

-  **Add Favourite**
-  **Add Form**
-  **Email Patient**
-  **Open**
-  **Remove**
-  **Portal**
-  **Help**
-  **Settings**
-  **Find Health Service**

DR. KAVANAGH'S CLINIC

Time	Mon, Sep 21, 2015	
8:45	x	
9:00AM	← ? ~shoulder pain	
9:15	← ? ~fluid in the ears	
9:30	← ? ~GAD / MDD / stress	
9:45	← ? ~5 yo sore throat	
10:00AM	← ? ~URI	
10:15	← ~opioid renewal	
10:30	← ~BP check / med review	← ~R shoulder pain
10:45	← ? ~cough	
11:00AM	← ~pre-op	
11:15	← ~burn on forearm	
11:30	← ? ~cough/cold	
11:45	← ? ~lightheadedness	← ? ~walk-in URI
12:00PM	x	← ? ~same-day UTI
12:15	x	

I use a questionnaire for all of these visits, either online or via the tablet.

CASE STUDY: HAPPY VALLEY VALLEY FHT



Happy Valley
Family Health Team

- 20,000 patients
- Tablets and online questionnaires for routine clinical visits
- Well baby, physicals, chronic disease management
- Mental health screens
 - PHQ-9, GAD-7
- Very positive feedback from patients

A tablet displaying the Nipissing District Developmental Screen (ndds.ca) interface. The screen shows the title 'The Nipissing District Developmental Screen is a checklist designed to help monitor your child's development.' Below this, it asks 'By six months of age, does your baby...' followed by five numbered questions. Each question has 'Yes' and 'No' radio button options. The questions are: 1. Swipe at and reach for objects within view? 2. Turn head and look in the direction of a new sound? 3. Respond to own name? 4. Smile and babble when given adult attention? 5. Vocalize pleasure and displeasure? (squeal with excitement or grunt in anger). At the bottom of the screen, there are three blue buttons: 'Back', 'Quit', and 'Next'. The tablet's status bar at the very bottom shows the time as 12:14.

CLINICIAN & STAFF REPORTED RESULTS

Time Savings

Time savings in more than 90% of patient cases

Less time spent on demographic reconciliation and data entry

Improved Interactions

More time spent interacting with patients and less time typing in EMR

Better Documentation & Improved Adherence to Clinical Guidelines

Uncovered previously undisclosed patient concerns and red flags

Positive Patient Feedback

Overwhelmingly positive patient feedback: 91% average patient score on the System Usability Scale

ADMINISTRATIVE APPLICATIONS

- Patient Registration
- Office Policy Consent
- Email Consent
- Demographic Updates
- Medication Reconciliation

CLINICAL APPLICATIONS

- 400+ Guideline-Based Clinical Forms
- Focused History Forms
- Standardized Scales
- Agenda Setting
- Automated Scoring
- Screening (Nipissing, M-CHA etc)

QUALITY IMPROVEMENT & RESEARCH APPLICATIONS

- QIP/Patient Satisfaction Surveys
- Smoking Cessation Programs
- Lung Cancer Screening
- Health Equity Surveys
- Dementia Wellness Survey
- Flu Shot Invitations
- General Health Screening

DISCUSSION & Q&A

