Using Data to Increase Capacity in Ambulatory Care

Nor-Lea
Hospital District

Session #156, February 22, 2017

Dan Hamilton, COO, Nor-Lea Hospital District

Speaker Introduction

Dan Hamilton

Chief Operating Officer

Nor-Lea Hospital District

Conflict of Interest

Dan Hamilton

Has no real or apparent conflicts of interest to report.

Agenda

- Who we are

- Our population boom

- How we used data to increase capacity

- The bottom line improvement

- How we used data to inform our new clinic design

Learning Objectives

- Explain how Real-time Locating Systems (RTLS) gather operational data such as wait times, room utilization, provider time with patients, etc.

- Recognize how operational data can be used to engage staff for process and workflow improvement

- Discuss specific, data-based improvements that can increase capacity in an ambulatory setting

S Improved Patient, Staff & Provider **Satisfaction**

T Reduced days to receive appointment in order to provide quicker **Treatment**

E We implemented a system to automatically collect **Electronic Data** on operations

P Increased access and capacity to improve the health of our **Patient Population**

S The **Savings** realized allowed our clinic to be profitable for the first time in its history

REALIZING THE *VALUE* OF **HEALTH IT**

Health IT creates **five kinds of value** of benefit to patients, healthcare providers and communities.

S SATISFACTION

T TREATMENT/CLINICAL

E ELECTRONIC SECURE DATA

P PATIENT ENGAGEMENT AND POPULATION MANAGEMENT

S SAVINGS

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Who We Are

- 25-bed critical access hospital in Lovington, New Mexico
- Serving 110,000 people in SE New Mexico & West Texas

WHERE THE
BRIGHTEST MINDS
IN HEALTH AND IT MEET

- 500 Employees

- 48 Full-time Providers

Who We Are

Tatum

Lovington

Hobbs

**Lovington Medical Clinic
2012 Vital Statistics**

- 15,900 Square Feet
- 25 Exam Rooms
- 6 Providers

Map data ©2016 Google, INEGI
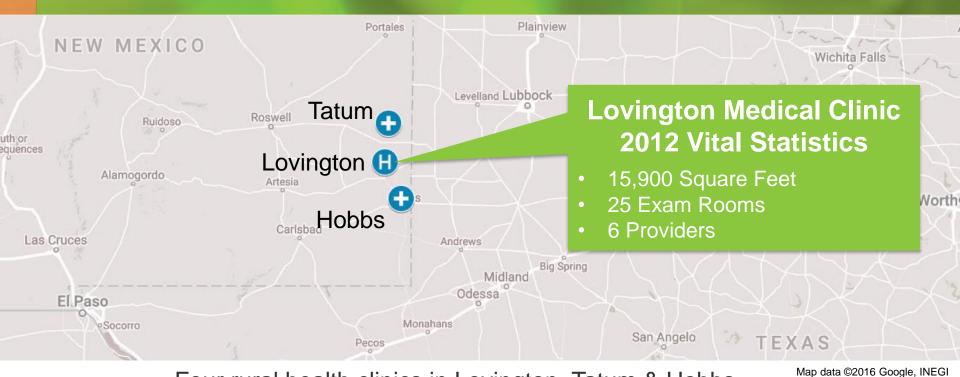
- Four rural health clinics in Lovington, Tatum & Hobbs
- Free-standing pediatric specialist clinic in Hobbs
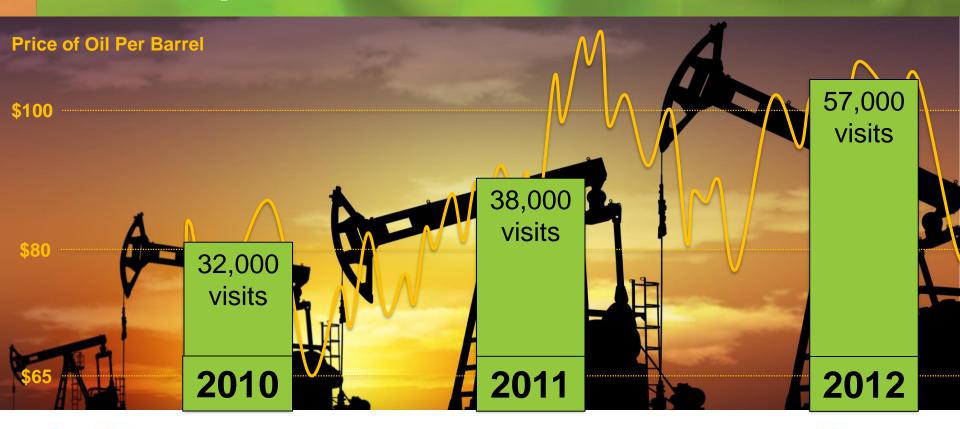
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Patient Satisfaction

2010

79%

2011

54%

2012

24%

- 30-60 days to receive an appointment
- 20-45 minutes just to get registered
- 1-2 hour wait in the lobby

Staff & Physician Satisfaction

2010	2011	2012
Staff 93%	Staff 72%	Staff 68%
Phys 78%	Phys 41%	Phys 28%
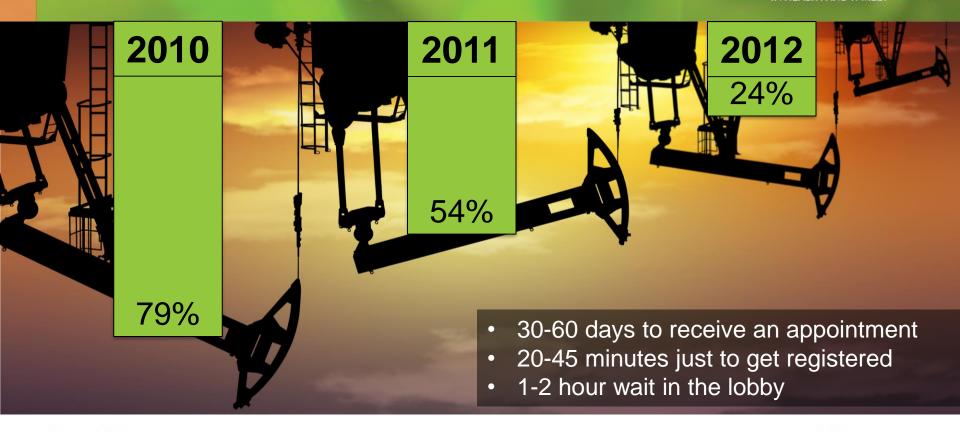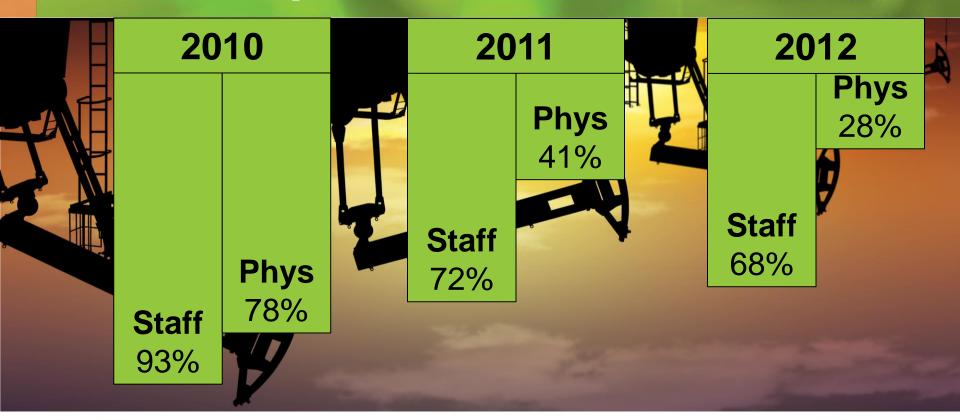
What We Tried

What Worked: RTLS

155 sensors installed in each exam room, hallways, waiting area, etc.

25 Staff Badges
100 Patient Badges

Real-time locating system turns location information into

Accurate, Reliable Operational Data
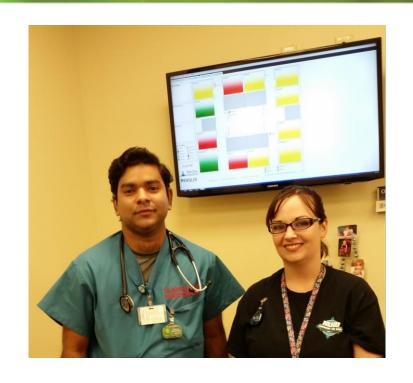
- Engaged staff to solve issues

- Multi-disciplinary service team:
  – Administrators

  – Providers

  – Nursing

  – Support Staff

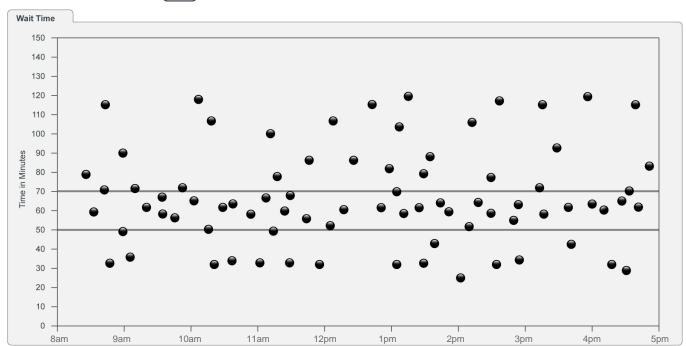# Patient Wait Times: Reports

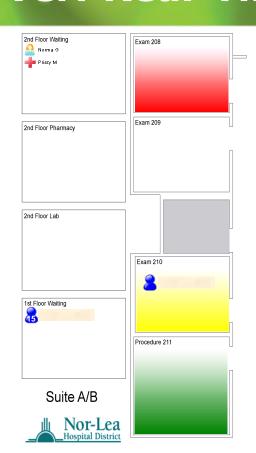## Workflow Time Analysis

Patient Wait Times: Real-Time

Room Turnover: Real-Time
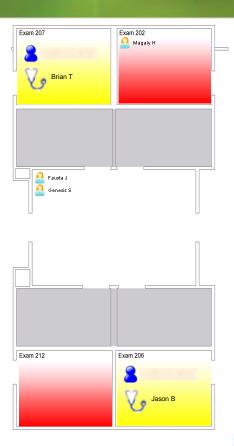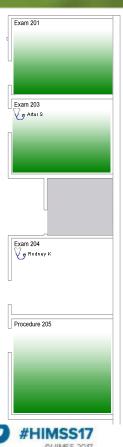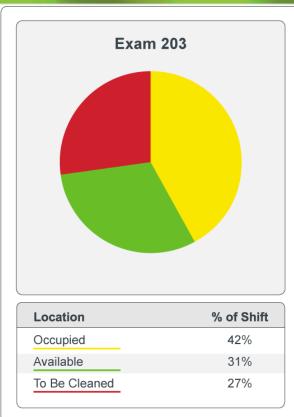
Clean & Available

In Use

Needs Turnover

2nd Floor Waiting
Norma G
Prissy M

Exam 208

2nd Floor Pharmacy

Exam 209

2nd Floor Lab

1st Floor Waiting
15

Suite A/B

Exam 210

Procedure 211

Exam 207
Brian T

Exam 202
Magaly H

Fausta J
Genesis S

Exam 212

Exam 206
Jason B

Exam 201

Exam 203
Artur S

Exam 204
Rodney K

Procedure 205

Room Turnover: Reports

Clean & Available

In Use

Needs Turnover

Exam 203

Location	% of Shift
Occupied	42%
Available	31%
To Be Cleaned	27%

Exam 207 — Brian T

Exam 202 — Magaly H

Exam 201

Exam 203 — Artur S

Fausta J
Genesis S

Exam 204 — Rodney K

Procedure 205

Exam 212

Exam 206 — Jason B

WHERE THE
BRIGHTEST MINDS
IN HEALTH AND IT MEET
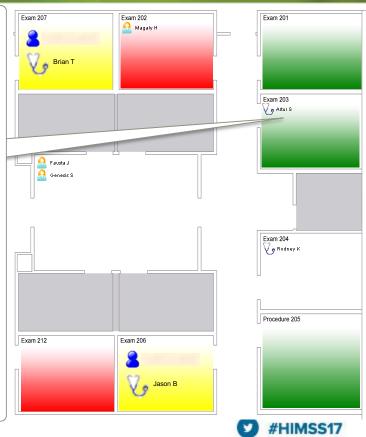
**Practiced in
FRONT of clinic**

**Practiced in
BACK of clinic**

RN

RN

RN

RN

**25-30
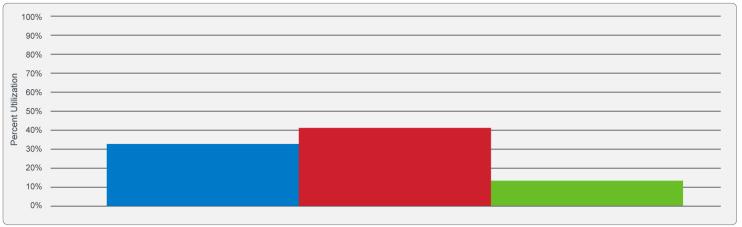patients/day**

**16
patients/day**

Staffing Reports

Staff Utilization by Location

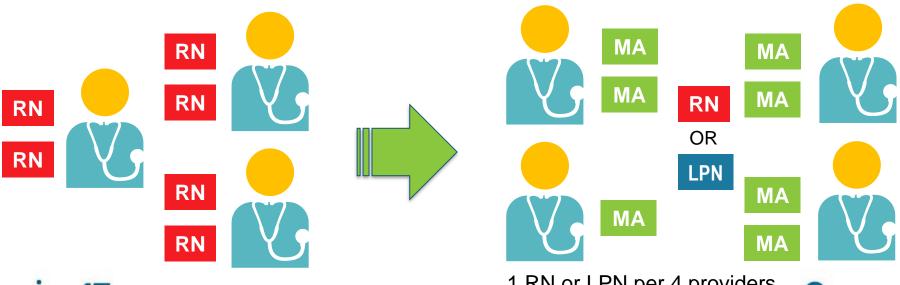| Day	Badge Type	Time Spent in Utilization Area	Total Time Spent within Location Boundaries	Percent Utilization	Individuals
4/14/2015	Medical Assistant	6:02	18:45	32.21%	3
	Provider	13:02	31:54	40.87%	5
	RN	2:18	17:35	13.04%	3

Staffing Changes

- Added a second waiting room in the back of the clinic so MAs didn't have to walk as far to room the patient

- Changed RN staffing ratio

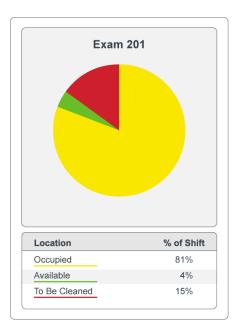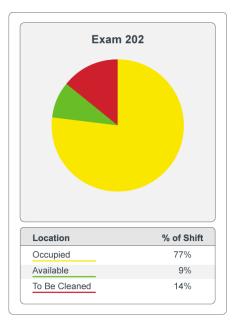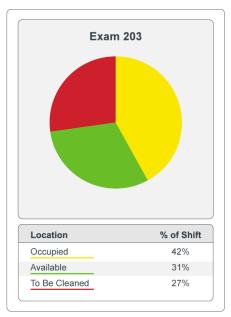2 RNs per provider
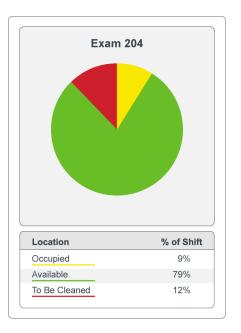
1 RN or LPN per 4 providers
1-2 MAs per provider

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Exam Room Utilization

Exam 201

Location	% of Shift
Occupied	81%
Available	4%
To Be Cleaned	15%

Exam 202

Location	% of Shift
Occupied	77%
Available	9%
To Be Cleaned	14%

Exam 203

Location	% of Shift
Occupied	42%
Available	31%
To Be Cleaned	27%

Exam 204

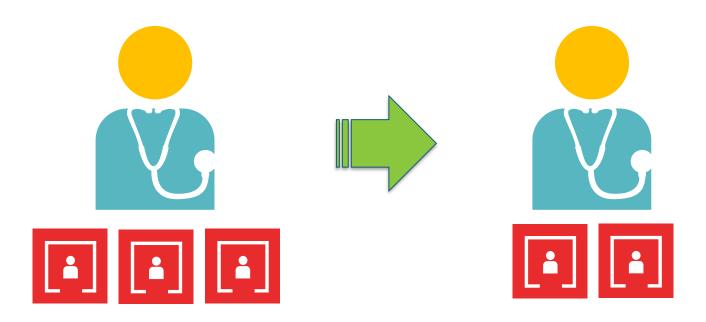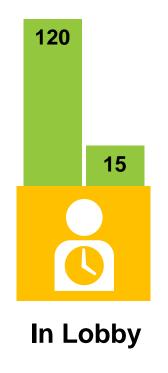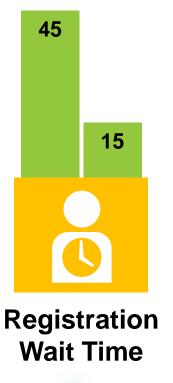| Location	% of Shift
Occupied	9%
Available	79%
To Be Cleaned	12%

Registration Changes
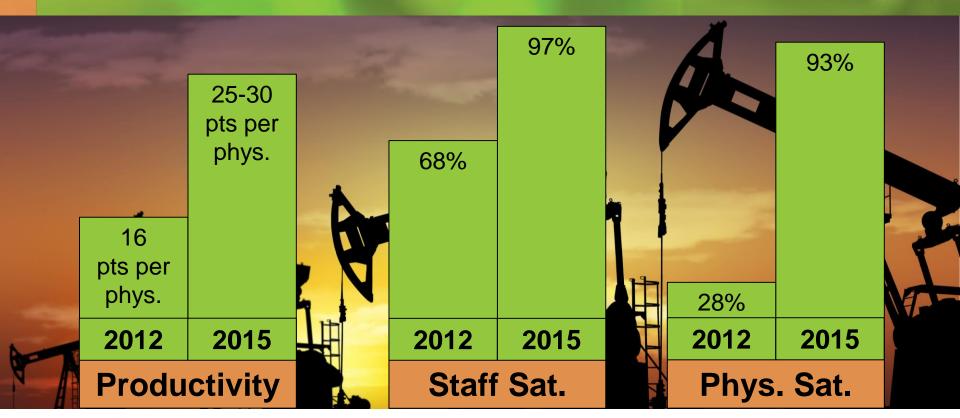
- Pre-registration the evening before patient appointment

- Change lab & X-ray registration to two bays

- Opened a call center to book the appointments

- No more ringing phones to interrupt staff

45

15

Registration Wait Time

Satisfaction & Productivity

WHERE THE
BRIGHTEST MINDS
IN HEALTH AND IT MEET

Productivity
- 2012: 16 pts per phys.
- 2015: 25-30 pts per phys.

Staff Sat.
- 2012: 68%
- 2015: 97%

Phys. Sat.
- 2012: 28%
- 2015: 93%

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Patient Experience

	Days to Apt		Wait Times		Satisfaction	
	2012	2015	2012	2015	2012	2015
	30-60 days	5-7	160 min	10 min	24%	80%

Revenue

2014: First profitable year in history

$6.25M

2012

$6.48M

2013

$6.85M

2014

$10.3M

2015
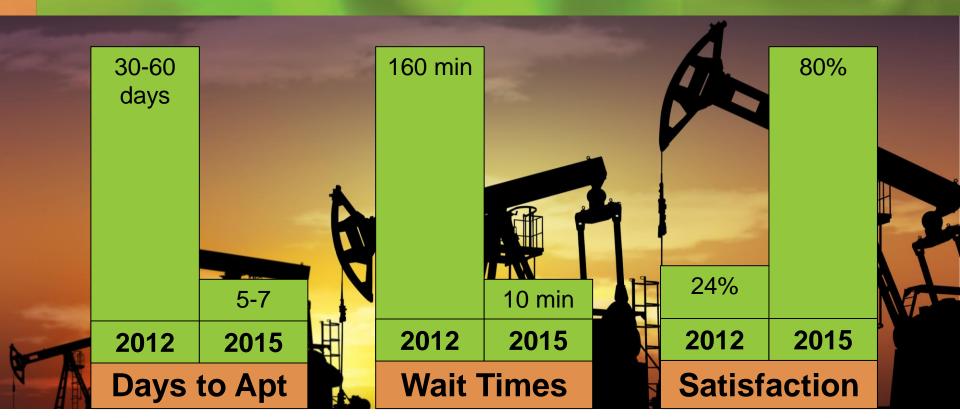
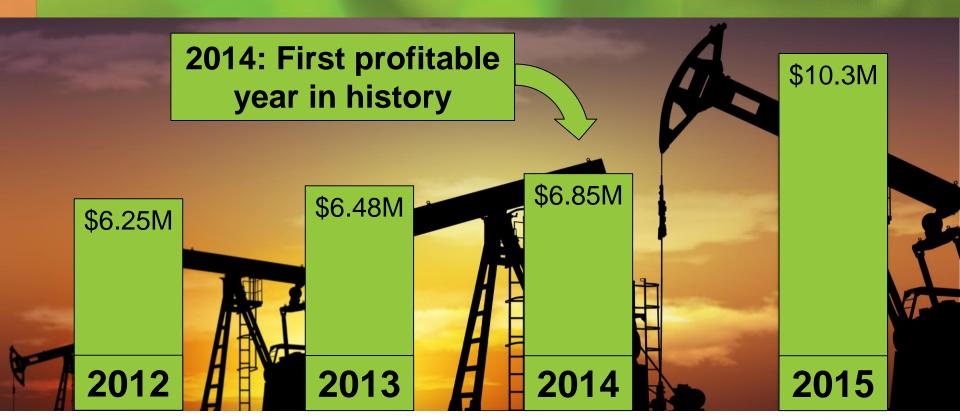# New Clinic: Zero Wait

Used RTLS data to design:

- Number of rooms per provider
- Optimal staffing
- Efficient workflow

290 patients/day

NAIOP Award of Merit for Healthcare Design

Key Takeaways & Lessons

- Have a plan in place for what data you want to capture before installing the RTLS to avoid adding/changing sensor locations.

- Involve front-line staff in system implementation

- Create multi-disciplinary teams to look at data and recommend change

- Physicians must participate in committees. If they're not a part of it, they're not going to buy into it.

- Educate staff on how to collect badges at the end of the visit so patients don't walk out the door with them.

- If badges do walk out the door, have a plan in place to contact the patient (we send them mailers). Place a sensor above the exit that ends the patient visit.

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- Don't implement RTLS and process improvement during EMR projects

- Use data to plan for new builds

  - Put patient waiting areas closer to the doctors

  - Phone register patients with on-site check-in (also reduces noise & interruptions)

  - Separate check-in areas for Lab & X-ray patients

  - Place 4 providers per pod to allow for cost-effective staffing

  - Convenient locations for pharmacy, lab & other services

S Improved Patient Satisfaction 471%
Improved Staff Satisfaction 155%
Improved Physician Satisfaction 232%

T Provide quicker treatment by reducing
days to receive appointment by 88%

E Automatically collected operational data
helped make informed improvements

P Increased provider productivity by 49% for
more access to the patient population

S Saved resources and time to make the
clinic profitable for the first time in history

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THE *VALUE* OF
HEALTH IT

Health IT creates **five kinds of value**
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