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Health and Human
Services

Texas Department of State
Health Services

Newborn Screening ETOR in Texas

**Electronic Test Ordering and
Reporting Successes and Challenges**

Electronic Orders

Newborn Screening SELF-PAY
 TEXAS DEPARTMENT OF STATE HEALTH SERVICES Laboratory Services Section CLIAN0000044
 FORM NBS 4 Rev 01/13 Expires 12/31/2015 Telephone # (202) 251-8522 ext. 7315

INSURANCE: _____
 Please read the instructions on the back of this form and carefully USE BLOCKING, PRINT INFORMATION COMPLETELY, ACCURATELY & LEGIBLY IN BLOCK CAPITAL LETTERS.

MOTHER INFORMATION

Mother's Last Name: KLAS Mother's First Name: MGM DSHS Lab No. For Texas DSHS Use Only: _____
 Mother's Name: _____ Social Security #: _____
 Mother's Birth Date: 11/10/1974 Medical Record No.: _____
 Direct Address: _____ Apt. No.: _____
 City: _____ Zip Code: _____ State: _____
 Best Phone Number to Reach Mother: _____ Newborn's Father's Last Name: _____

BABY'S PRIMARY CARE PHYSICIAN INFORMATION

Physician Name (Last, First): _____ NPI No.: _____
 Direct Address: _____ Apt. No.: _____
 City: _____ Zip Code: _____ State: _____
 Phone No.: _____ Fax No.: _____

NEWBORN INFORMATION

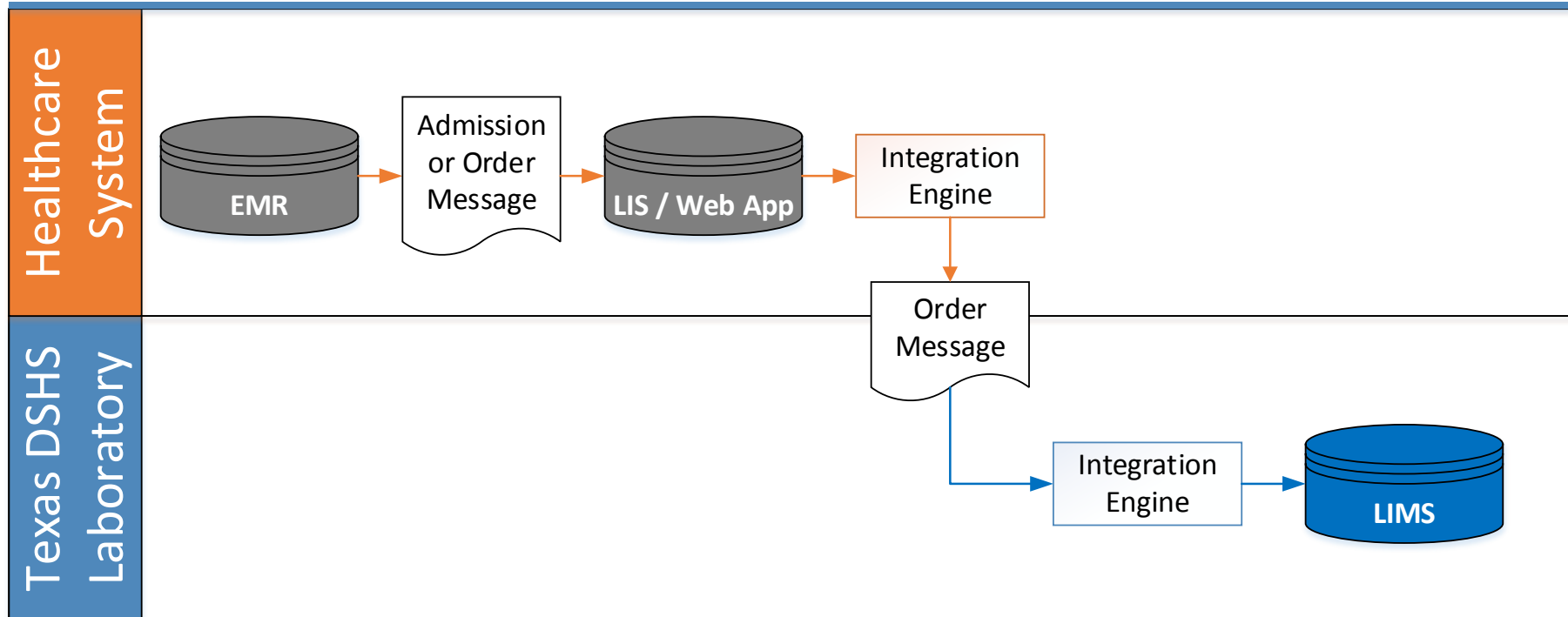
Infant's Last Name: KLAS First Name (Last A or B): _____
 Birth Order: _____ Sex: Female Birth Date: _____
 Birth Weight (grams): _____ Birth Length (cm): _____
 Sex: Male Female Other Ethnicity: White Black Hispanic Asian Other Status: Normal Sus. Phenylketonuria On Medication Transfused Both 1 & 2 All 1 & 2 All 2 & 3 All 1-3

SUBMITTER INFORMATION

NBS ID No.: _____ / NPI No.: _____
 Name: _____
 Address: _____
 City: _____ TX Zip Code: _____

Check to verify parent information & decision form distributed:

Barcode: TX 13-2000001 X P
 DSHS Copy



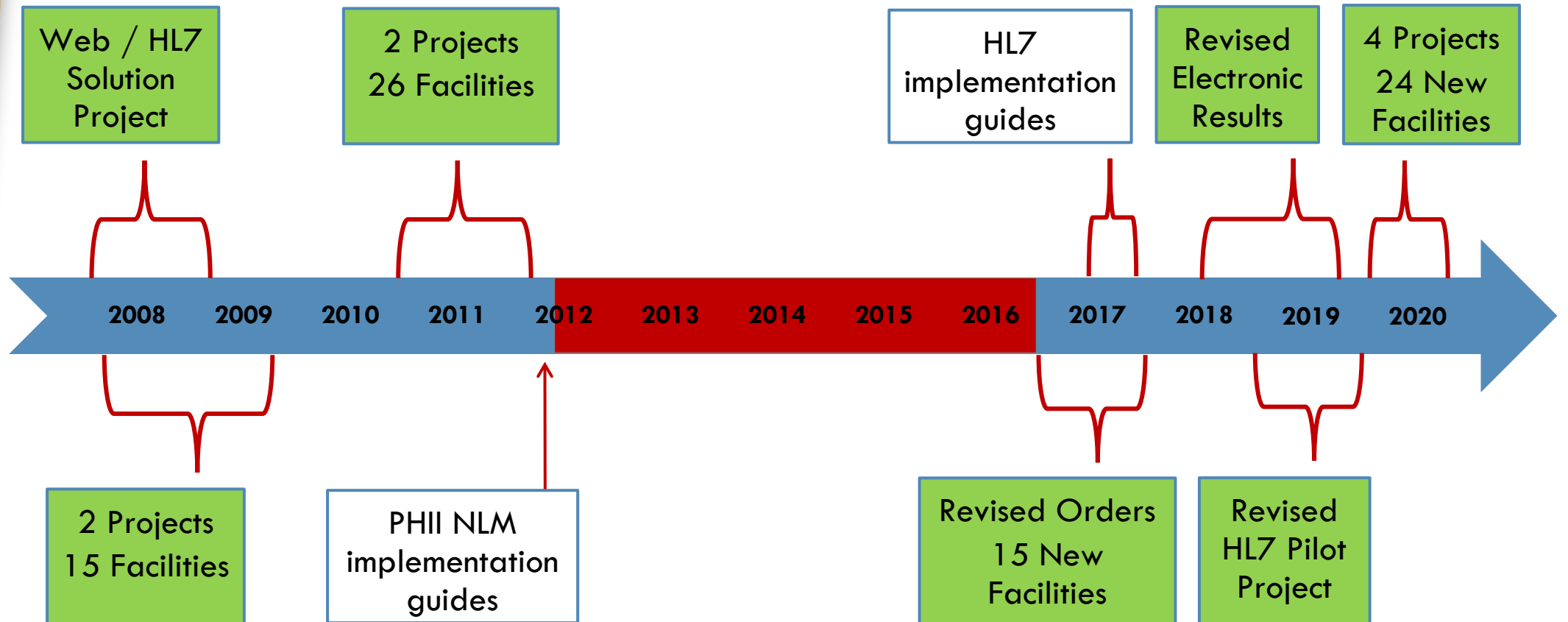
NBS ETOR in Texas



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Successes

Using ETOR to Improve Quality and Efficiency



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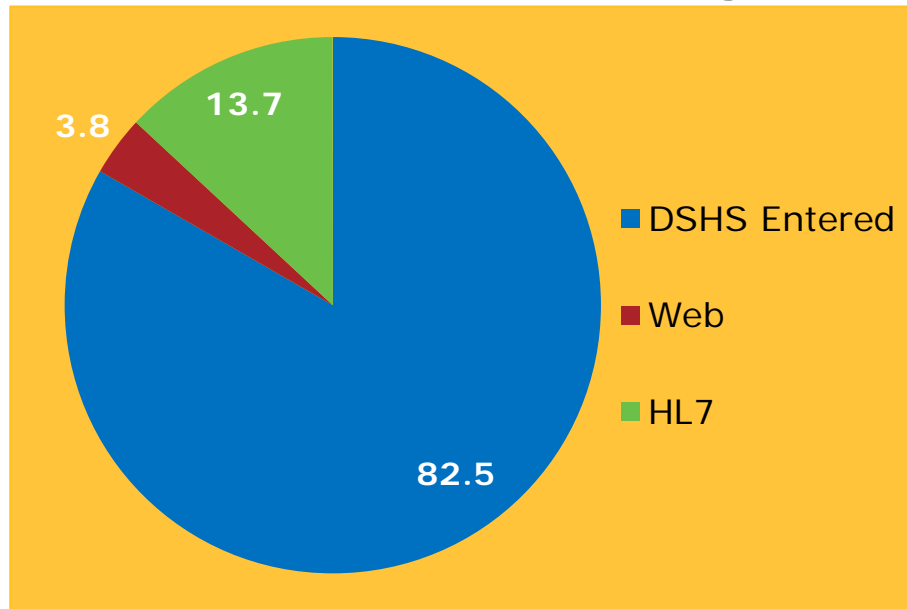
Electronic Test Ordering and Reporting (ETOR)



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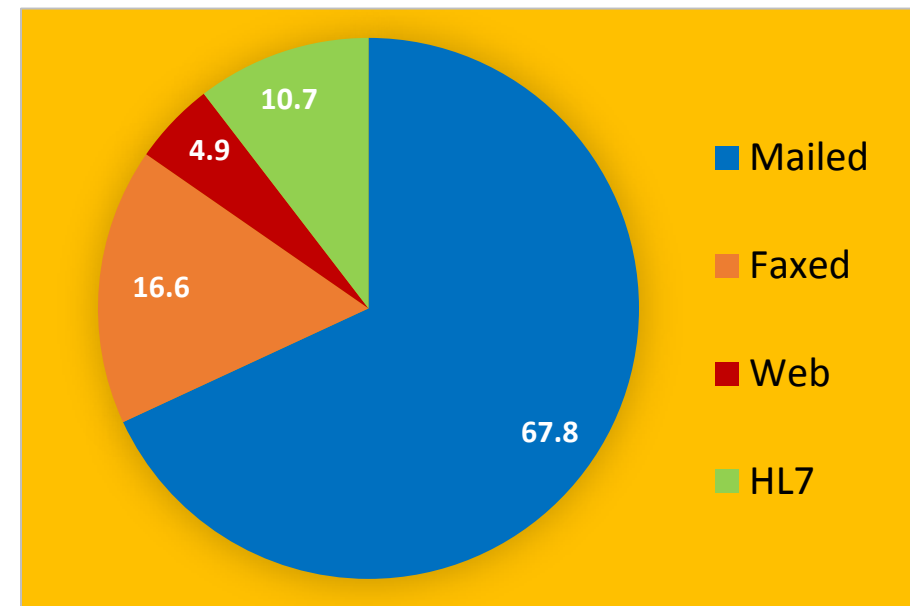
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Test Ordering



~130,000 per year
(17.5% of NBS)

Reporting



~117,000 per year
Electronic Reporting Only



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ETOR Lab Data Entry Time Savings

130,000 Specimens

X 2 Minutes

4,333 Hours saved per year

2,080 hours per FTE

X .75 of time for actual tasks

1560 Hours of work per FTE

$4,333 / 1,560 = \mathbf{2.75 \text{ FTEs}}$

ETOR – Data Accuracy



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Manually entered data from a label

VS.

Same data electronic via HL7

Differing Data	Total Specimens	Percent Specimens
1 Field	95	19.8%
2 Field	22	4.6%
3 Field	7	1.5%
4 Field	6	1.2%
5 Field	1	0.2%
>5 Field	1	0.2%
1+ Field	132	27.4%

N = 481 specimens

Important Note: In many cases, standard operating procedure for data entry allows for minor changes or omissions of data elements which may account for some differences in the data .

Field Name	Differing Data	Percent Differences
Mother Street Address	28	5.8%
Mother City	21	4.4%
Medicaid Number	16	3.3%
Baby Last Name	15	3.1%
Baby First Name	12	2.5%
Birth Order	12	2.5%
Medical Record Number	12	2.5%
Mother First Name	12	2.5%
Ethnicity	10	2.1%
Status	9	1.9%
Mother Last Name	8	1.7%
Mother Phone Number	8	1.7%
Mother Zip	6	1.2%
Physician Phone	5	1.0%
Mother Birth Date	4	0.8%
Birth Time	3	0.6%
Feed	3	0.6%
Mother SSN	3	0.6%
Collection Date	3	0.6%
Collection Time	3	0.6%
Birth Date	1	0.2%
Mother State	1	0.2%

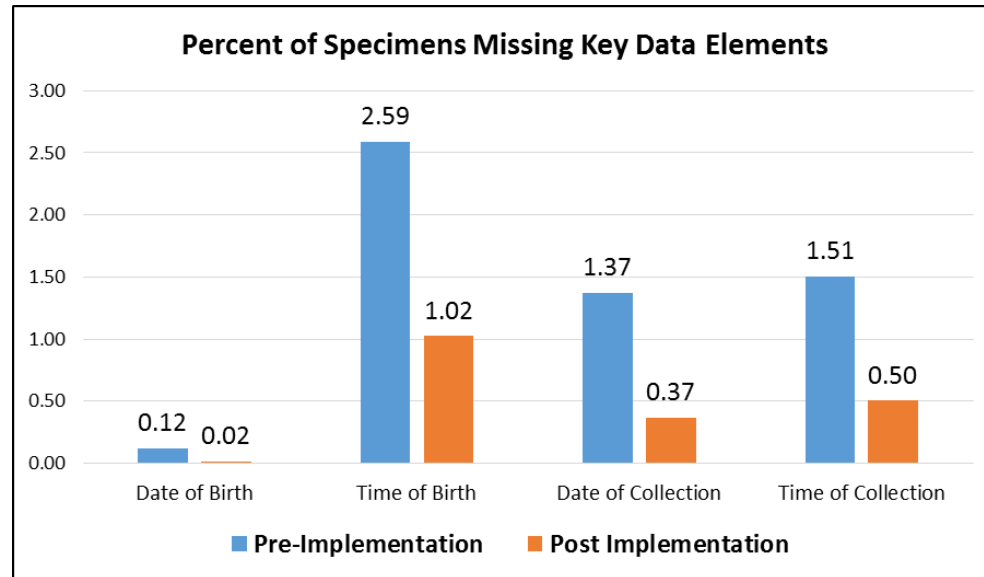
ETOR - Data Completeness



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Quality Improvement for 10 Hospitals that Implemented Electronic Ordering



HL7 Provider Report Card

Specimen Missing Key Demographic Information				
	Count	Percent	State Average	Goal
Goal: Submission of all key demographic information listed below *	1,054	99.15%	70.66%	100%
Missing date of birth	0	0.00%	0.21%	0%
Missing time of birth	9	0.85%	15.77%	0%
Missing / Invalid date of collection - may result in rejection for testing	0	0.00%	1.16%	0%
Missing time of collection	0	0.00%	11.71%	0%
Missing birth weight	0	0.00%	6.11%	0%
Missing physician name	0	0.00%	7.90%	0%
Missing physician phone number	0	0.00%	9.14%	0%

Challenges

How do we get and keep healthcare providers engaged?



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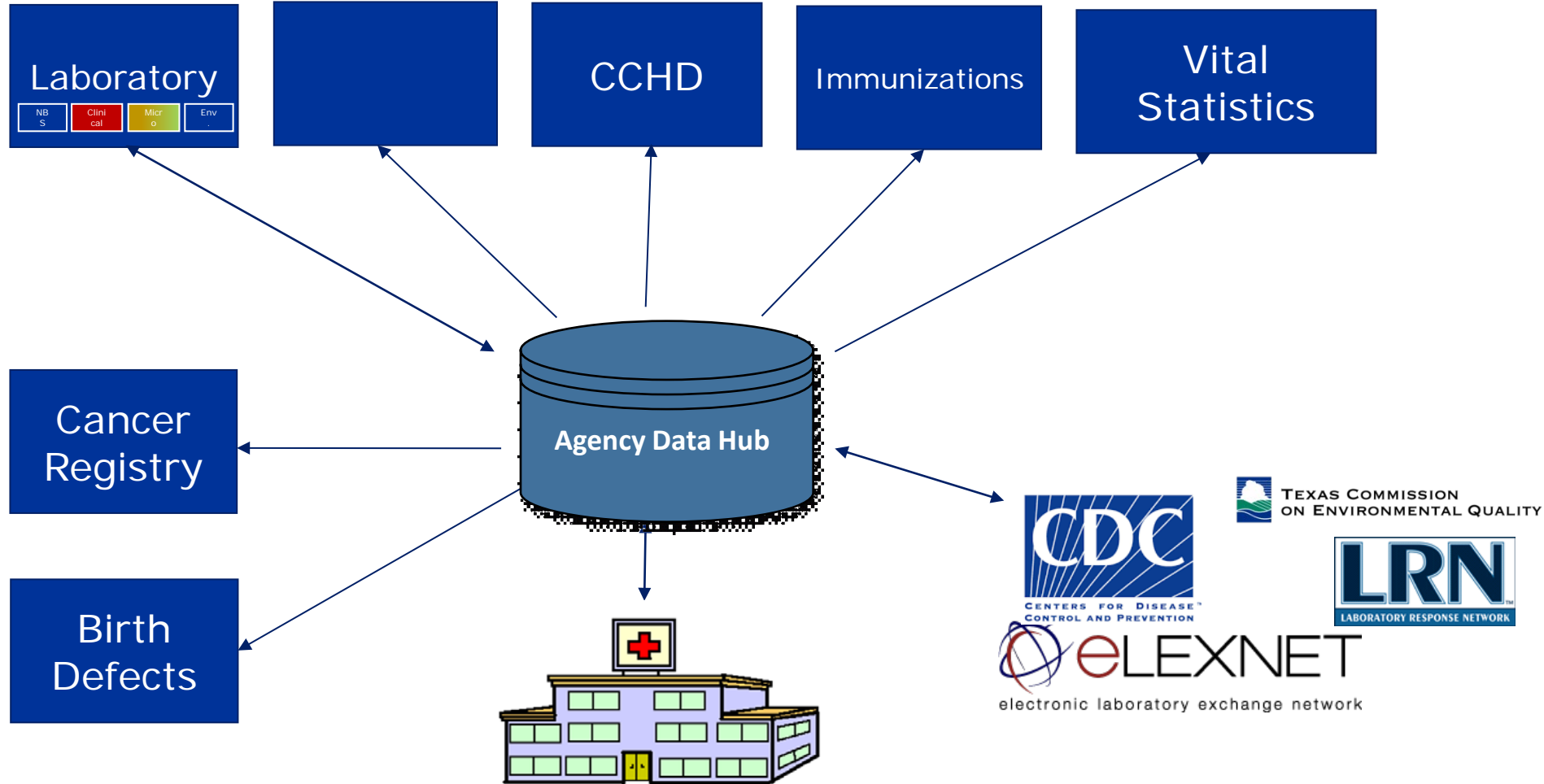
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Agency Xanadu

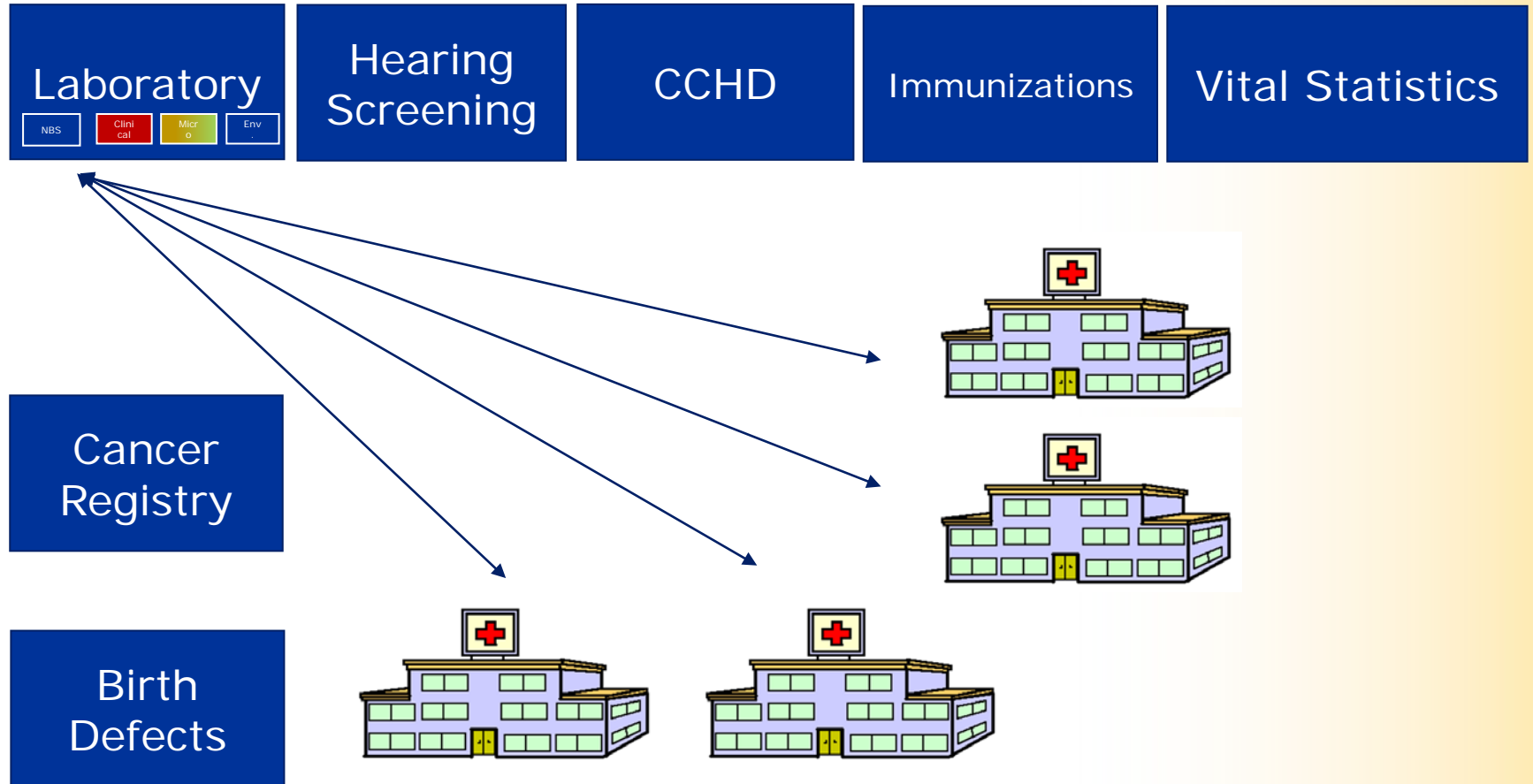


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NBS Bloodspot Silo



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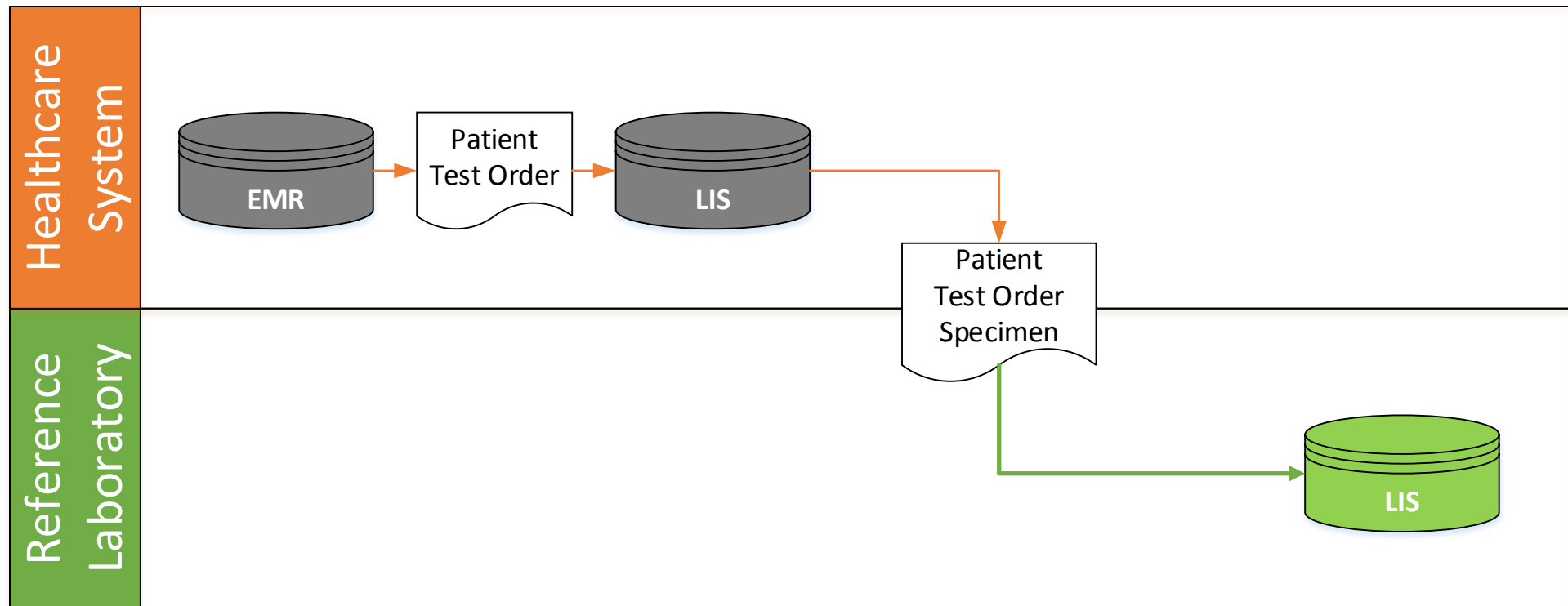
Electronic Order – Standard Test



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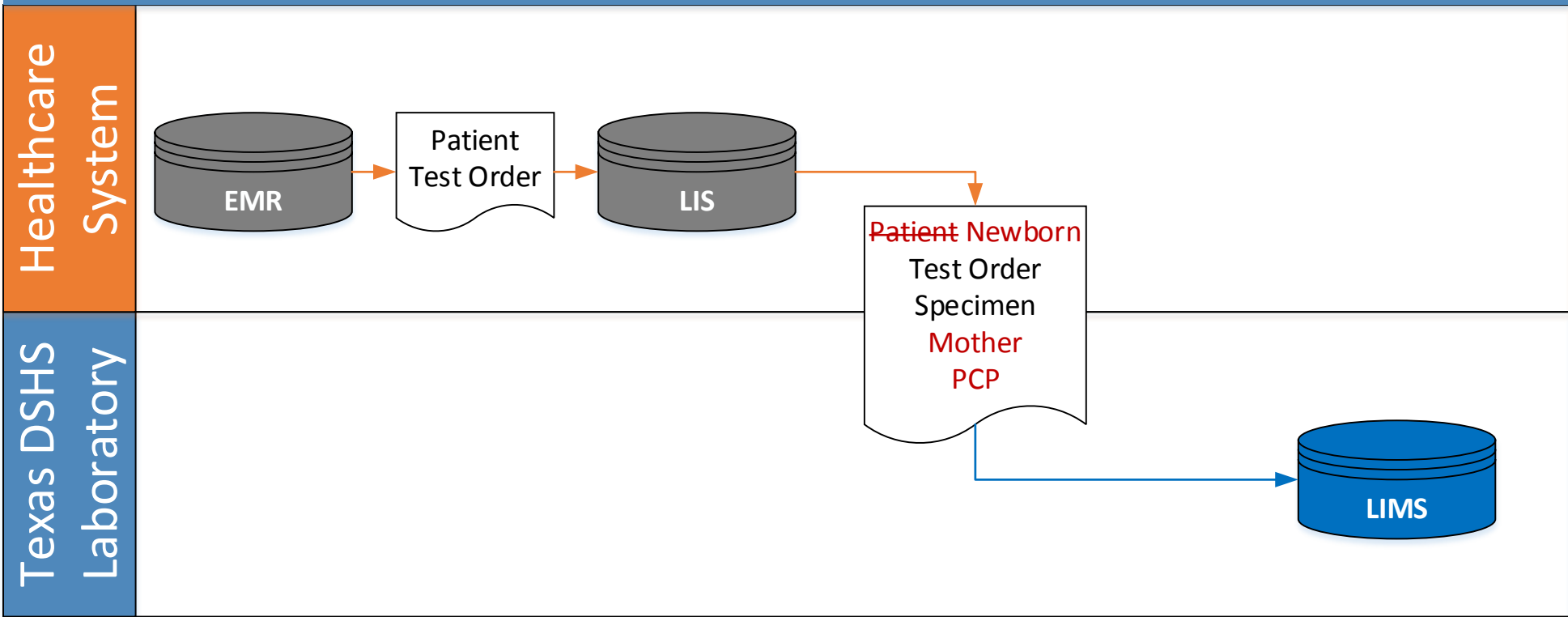
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Electronic Order - NBS



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Other Pain Points

- Multiple disorder results for a single panel order
- Adherence to standards
- Specimen labeling
- EMR / LIS Vendor solutions for NBS
- Healthcare system priorities

“Data standards are like toothbrushes. Everyone agrees they are a good thing but everyone wants to use their own.”



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Thank you

Brendan Reilly

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