The Wisconsin Experience Getting In-Step with NewSTEPs Quality Indicators

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Annual Review of Patient Database

accurate count of infants screened
correctly identify first and subsequent screens

Pull all specimens by birth year (with demographics)

- Sort by:
    1. Mother's name
    2. Date and time of birth
    3. Patient name
- Check for repeats misidentified as first specimens
- Check for missed patient merges

Elements Added to LIMS
screening specimens

- Date and time specimens received <u>in lab</u>

- Date and time providers notified of presumptive positive results

- Flag for out of state births

- Discrete reasons for unsatisfactory specimens

- Flags (field-specific) for missing essential information

- Documentation of not-screened status

Elements Added to LIMS
short-term follow-up

- Worklists for follow-up

  unacceptable specimens

  out of range results

- External confirmatory results

- Date of diagnosis

- Date treatment initiated

QI 1: Percent Specimens Unacceptable Due to Improper…

1a) … collection
1b) … transport

- Reason(s) for unsatisfactory specimen are designated and stored discretely to enable count of specimens in each category

QI 2: Percent Specimens Missing State-Defined Essential Information

- Essential information
  - ✓ Birth date AND time
  - ✓ Collection date AND time
  - ✓ Birth weight
  - ✓ Gestational age

- Specimens automatically flagged when <u>any</u> of the six fields are not initially entered (*because information not provided, not legible, or otherwise problematic*)

- Able to count specimens 'missing' information at both the specimen- and field-level

QI 3: Percent Eligible Infants Without a Newborn Screen

- Wisconsin requires a card submitted for every baby born, regardless of blood collection

- If blood not collected, reason (*parent refusal, transferred, deceased*) is documented and stored discretely enabling tracking and follow-up

(For details, see Poster 40)

QI 4: Percent Infants Without Recorded Resolution
4a) unacceptable specimens
4b) out-of-range results

- Upon final verification, specimens automatically drop to specific follow-up worklists

- Summary reports (*including all specimens received for patients on follow-up worklist*) allow identification of any patients lacking subsequent valid specimen

QI 5: Timeliness of Newborn Screening Activities

a) **Birth** to **collection**

b) **Collection** to **receipt in lab**

c) **Receipt** to **reporting** out results

d) **Birth** to **reporting** out results

e) **Notification** of out-of-range results to **intervention**

f) **Birth** to **confirmation** of diagnosis

g) **Birth** to **ruling out** diagnosis

added to LIMS

QI 5: Timeliness of Newborn Screening Activities

With instant of all key events in LIMS, able to calculate time intervals…
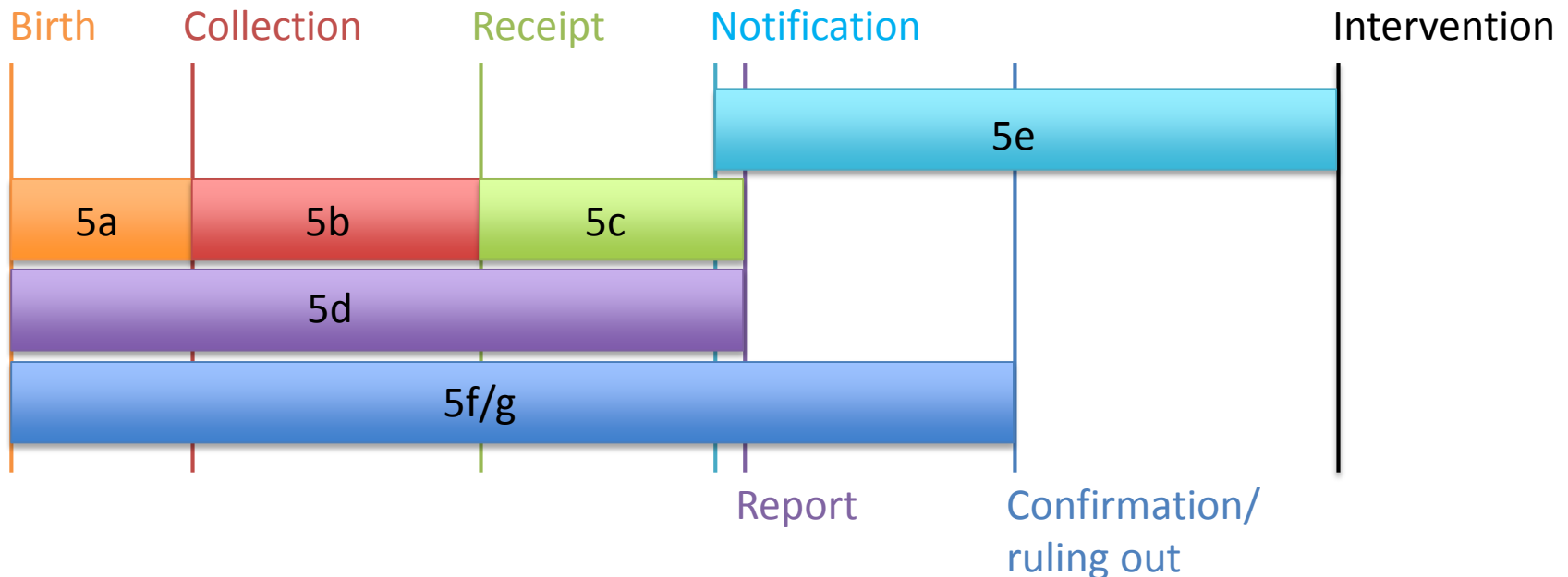
MISSING KEY INFORMATION

**DEC** 1 of 24 specimens were missing any of the following pieces of key information:

- *BIRTH DATE and TIME*
- *BIRTH WEIGHT*
- *COLLECTION DATE and TIME*
- *GESTATIONAL AGE*

Period At A Glance	% Specimens Missing Key Information				
	SEP	OCT	NOV	DEC	Period Total
Submitter (N)	0	2	0	1	3
Submitter (%)	0.0%	8.0%	0.0%	4.2%	3.1%
State (%)	3.8%	3.9%	3.8%	3.9%	3.9%

UNSATISFACTORY SPECIMENS

DEC 2 of 24 specimens were unsatisfactory

Reason(s) For Unsatisfactory Designations:
*A specimen may have more than one reason for being deemed unsatisfactory for testing.*

- Blood Clots — 50.0%
- Filter Paper Damaged (Heel) — 50.0%
- Total: — 100.0%
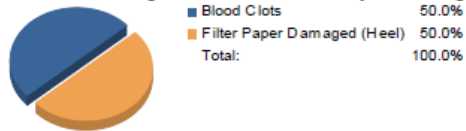
Period At A Glance	% Specimens of Unsatisfactory Quality:				
	SEP	OCT	NOV	DEC	Period Total
Submitter (N)	0	0	0	2	2
Submitter (%)	0.0%	0.0%	0.0%	8.3%	2.0%
State (%)	1.3%	1.3%	1.2%	1.1%	1.2%
Additional (N) *	0	0	0	0	0

* Specimen(s) unsatisfactory for reason(s) outside of submitter's control are excluded from submitter and state %.

AGE AT INITIAL SPECIMEN COLLECTION
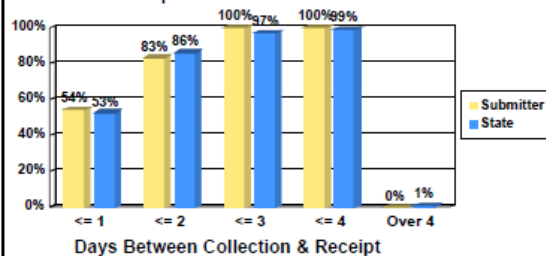
DEC Initial Specimens = 22

Age (hours) at Collection
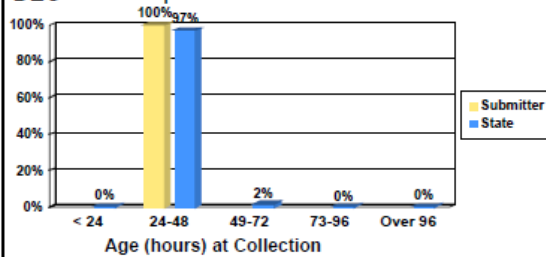
Period At A Glance	% Initial Specimens Collected Within Recommended 24-48 Hours:				
	SEP	OCT	NOV	DEC	Period Total
Submitter (N)	19	25	29	22	95
Submitter (%)	95.0%	100.0%	100.0%	100.0%	99.0%
State (%)	96.9%	97.5%	97.7%	97.3%	97.4%

DAYS BETWEEN SPECIMEN COLLECTION AND RECEIPT AT WSLH

DEC Total Specimens = 24

Days Between Collection & Receipt

Period At A Glance	% Specimens Received Within 3 Days After Collection:				
	SEP	OCT	NOV	DEC	Period Total
Submitter (N)	20	25	29	24	98
Submitter (%)	100.0%	100.0%	100.0%	100.0%	100.0%
State (%)	96.5%	99.0%	98.2%	97.3%	97.7%

WSLH has a target goal of receiving 95% of specimens within three days after collection.

Included on monthly report to submitters

WISCONSIN STATE LABORATORY OF HYGIENE - UNIVERSITY OF WISCONSIN

QI 6: Percent Infants With Out-of-Range Results (Referral to Evaluation) by Disorder

- Specimens referred to evaluation are tagged* discretely by disorder

  specific follow-up task(s) automatically added upon result verification

- Summary reports group tagged specimens by patient to obtain count for each disorder

QI 7: Incidence of Confirmed Disorder Detected

- Confirmatory results entered into LIMS

- Disorder-specific flag added manually to those patients confirmed through follow-up to be affected by disorder

- NewSTEPs case template populated for upload to data repository

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