Health Care

Lab Utilization Committee

Executive Summary 2023

I. Purpose and Composition

a. Subcommittee of Utilization Management Committee
b. Oversight of all Clinical Laboratory Testing at MUHC
c. Reports to Utilization Management and ECOMS
d. Provides guidance to Lab Utilization Working Committee (LUWC) which implements new testing
e. Aligns with Contracting and Legal Services
f. Membership and participation
    i. Core committee members
        1. Detlef Ritter, MD – Co-Chair
        2. Clayton Butcher, MD – Co-Chair
        3. Matthew Smith, MD
        4. Kevin Clary, MD
        5. Brad Myers, PharmD
        6. Yezaz Ghouri, MD
        7. Amruta Padhye, MD
        8. Christian Rojas-Moreno, MD
    ii. Ancillary committee members
        1. Laura Hesemann, MD
        2. Robert Pierce, MD
        3. Bernie Eskridge, MD
    iii. Project Managers
        1. Kayla Smith
        2. Tracy Hall

II. Meetings

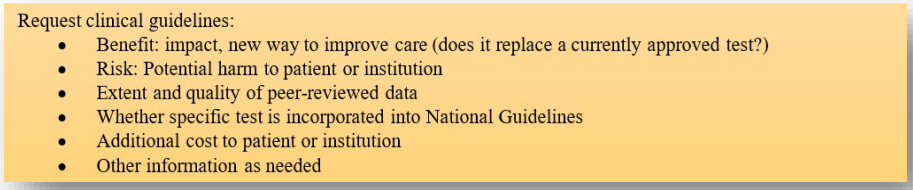
a. Conducted monthly meetings (10, did not meet in March and December)

III. Transparency and Accountability

a. Committee artifacts are available in Teams folder: Lab Utilization Committee – Ogrp
    i. Agendas, Minutes, request documentation, committee artifacts
    ii. Contact Kayla Smith for access (kayla.m.smith@health.missouri.edu)
b. All testing information and turnaround expectations are accessible at https://muhealth.testcatalog.org/

IV. Reference Laboratories

a. All new reference laboratory requests are reviewed by the Lab Utilization Committee and the LUWC
   i. Status as of December 2023
      1. Authorized reference labs: 37
      2. https://muhealth.testcatalog.org/show/RLTestRef
b. Application process for new reference lab requires the following
   i. Application by attending provider who must be credentialed by MUHC
      1. Outside reference lab sales representatives do not qualify
   ii. Clinical guidelines as established by the LUC



   iii. In-person presentation by credentialed attending provider
   iv. Short discussion
c. **Requests reviewed in 2023**
   i. 11 applications received; 1 application retracted with 10 approved

Test Requested	Rendering Laboratory	Requesting Physician
Pancreatic Molecular Markers	Interpace Diagnostics	Dr. Bukeirat (GI)
Albumin ISH	ProPath	Dr. Rao (Pathology)
Unity Screen	BillionToOne	Dr. Guinn (MFM)
Signatera	Natera	Dr. Hirner (Dermatology)
FoundationOne Tracker	Foundation Medicine	Dr. Hildebrandt (Hem/Onc)
AGVHD	Eurofins/Viracor	Dr. Hildebrandt (Hem/Onc)
Afirma Gene Expression Classifier	Veracyte	Dr. Manrique (Endocrinology)
RightMed Pharmacogenomics	OneOme	Dr. Black (Thompson Center)
NAVDX	Vareris	Dr. Biedermann (Rad. Oncology)
L-Asparginase	Granger Genetics	Dr. Bach (Hem/Onc)

d. **Reference labs discontinued in 2023**

Test	Department	Physician
Exagen DGS	Rheumatology	Dr. Siva
Vectra	Rheumatology	Dr. Siva
Trugraf	Nephrology	Dr. Yerram
First Screen (LabCorps)	ObGyn	

V. MU Policy Reviews and Guidance Completed

a. Laboratory – Pre-analytical specimen collection and processing (guideline)
   i. Test order authorizations by outside providers (MD/DO/Nurse Practitioners/PA)
b. Laboratory – Reporting critical values and significant findings (policy)
   i. Critical lab result communications for outside providers
c. Utilization review – Laboratory genetic testing policy

VI. Duplicate Order Alerts – Dr. Robert Pierce, Director of Clinical Decision Support

a. Reviewed and approved, in conjunction with the Clinical Decision Support Committee, inpatient and outpatient duplicate order alert settings (minimum retesting intervals) for 35 different commonly ordered labs.
b. Reviewed post-implementation alert data including override rates
c. Reviewed post-implementation lab completion data and approved modifications of alert business logic to minimize unnecessary alerting.
d. Future work/plans/goals:
    i. Audit feedback
    ii. Dashboard data/visualizations
    iii. Expansion of order alerts to other tests

Alert and Override Rates

These tables show 4 weeks of alert rates, overrides, and override rates

Inpatient			
Test	Count of alerts	Count of overrides	Override rate
Grand Total	1670	873	52.28%
PTT	330	147	44.55%
Lactate Dehydrogenase	266	232	87.22%
Hemoglobin A1C	223	26	11.66%
Thyroid Stimulating Hormone 3rd Generati	208	90	43.27%
Lipid Profile	85	21	24.71%
Lactic Acid	72	41	56.94%
C Reactive Protein Quantitative	70	48	68.57%
Ferritin Level	66	43	65.15%
Vitamin B12 Level	53	22	41.51%
Triglycerides	49	43	87.76%
Procalcitonin (PCT)	46	30	65.22%
Vitamin D Level	33	18	54.55%
Erythrocyte Sedimentation Rate	32	15	46.88%
Free Thyroxine	31	20	64.52%
Iron Level and TIBC	30	21	70.00%
Folate Level	27	15	55.56%
Bilirubin Total, Blood	19	17	89.47%
Bilirubin Direct	7	6	85.71%
GGT	5	4	80.00%
Prostate Specific Antigen	3	2	66.67%
PSA Screen	3	3	100.00%
T3 Free	3	3	100.00%
T4	3	3	100.00%
Alpha Fetoprotein (AFP)	2	2	100.00%
Anti-Neutrophil Cytoplasmic Antibodies w	1	0	0.00%
Carbamazepine Level	1	1	100.00%
Iron Level	1	0	0.00%
Total IgE Serum	1	0	0.00%

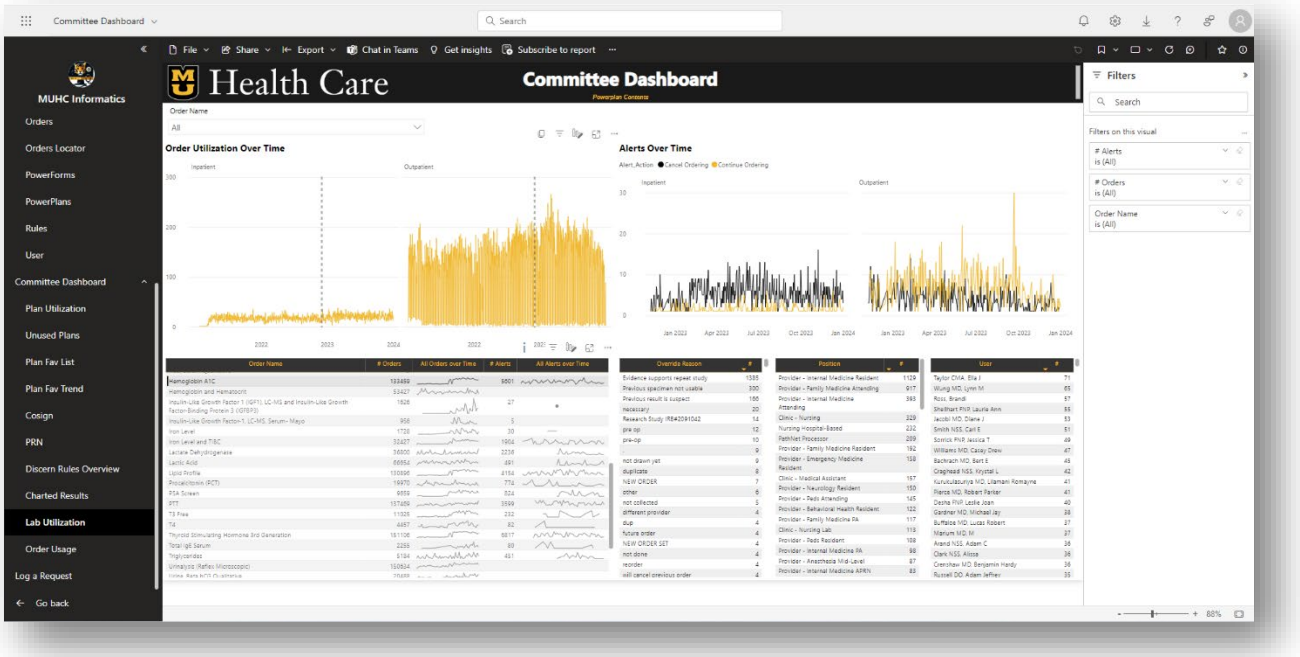
Outpatient			
Test	Count of alerts	Count of overrides	Override rate
Grand Total	3745	3025	80.77%
Thyroid Stimulating Hormone 3rd Generati	591	472	79.86%
Vitamin D Level	451	361	80.04%
Lipid Profile	424	326	76.89%
Ferritin Level	403	346	85.86%
Hemoglobin A1C	367	252	68.66%
PSA Screen	296	253	85.47%
Prostate Specific Antigen	279	254	91.04%
Vitamin B12 Level	221	175	79.19%
Free Thyroxine	119	99	83.19%
Iron Level and TIBC	108	82	75.93%
Lactate Dehydrogenase	84	72	85.71%
C Reactive Protein Quantitative	55	47	85.45%
CA 125	52	49	94.23%
Folate Level	45	32	71.11%
T3 Free	42	32	76.19%
Vitamin D 25 Hydroxy	41	34	82.93%
Alpha Fetoprotein (AFP)	30	24	80.00%
Erythrocyte Sedimentation Rate	23	18	78.26%
Ca 19-9	21	18	85.71%
PTT	14	9	64.29%
Carbamazepine Level	10	10	100.00%
AFP, Tumor Marker	8	8	100.00%
Iron Level	8	7	87.50%
Triglycerides	8	8	100.00%
C Reactive Protein HS	7	7	100.00%
T4	7	5	71.43%
GGT	6	4	66.67%
Insulin-Like Growth Factor 1 (IGF1), LC-	6	5	83.33%
Total IgE Serum	6	3	50.00%
Bilirubin Total, Blood	4	4	100.00%
CA, 15-3	3	3	100.00%
Anti-Neutrophil Cytoplasmic Antibodies w	1	1	100.00%
Bilirubin Direct	1	1	100.00%
CA 15-3-Mayo	1	1	100.00%
CA, 125	1	1	100.00%
CA, 19-9	1	1	100.00%
Insulin-Like Growth Factor-1, LC-MS, Ser	1	1	100.00%

Test Performance

This table shows the **top ten inpatient and outpatient tests w**ith implemented duplicate order alerts. Shown is the number of tests **performed per week** pre- and post-implementation; annualized tests avoided and estimated annual savings.

	Inpatient			Outpatient		
	Pre	Post	Tests avoided/year	Pre	Post	Tests avoided/year
25OH Vit D				8.63	8.41	11.44
HGB A1c	2.08	1.56	27.04	0.52	0.45	3.64
Vit B12	13.17	7.29	305.76	8.74	7.42	68.64
Folic acid						
Lipid panel	4.09	1.58	130.52	1.64	1.4	12.48
CRP	12.2	8.2	208			
Iron/TIBC				3.75	3.92	-8.84
Ferritin	19.8	15.97	199.16	11.91	12.32	-21.32
Procalcitonin	13.97	9.54	230.36			
TSH	11.23	5.66	289.64	2.16	2.34	-9.36
fT4				3.62	3.86	-12.48
PTT	20.84	19.23	83.72			
Lactate dehydrogenase	53.95	59.32	-279.24	20.12	20.37	-13
Lactic acid	24.8	22.95	96.2			
PSA screen				9.68	2.8	357.76
Total			**1291.16**			**388.96**

PowerBI Lab Utilization Dashboard – Under development

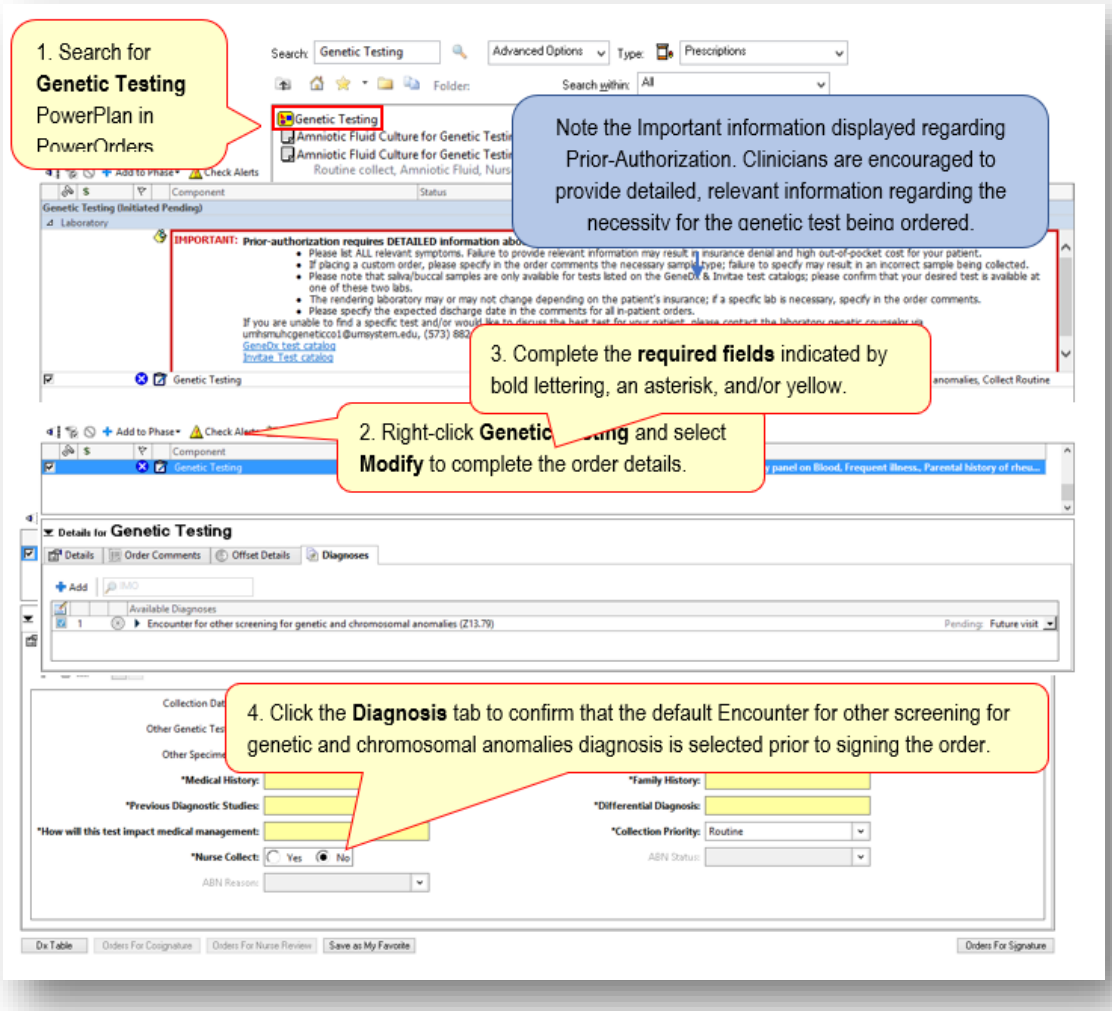


VII. Genetic Testing

a. Lab-driven genetic testing guidance established:
   i. Establishment of laboratory genetic counselor role.
      1. Filled by Caleb A. Heid, MS, CGC
   ii. Joined Patient-Centered Laboratory Utilization Guidance Services (PLUGS) group
      1. Offers recommendations on lab stewardship and utilization management
   iii. Implemented Utilization Management for Genetic/Molecular Testing
      1. Laboratory genetic counseling review for all orders that utilize a molecular CPT code
      2. Initiation of prior-authorization and determination of medical necessity
      3. Creation of Genetic Testing PowerPlan to help review cases

Genetic testing PowerPlan

Clinicians will now use the Genetic Testing PowerPlan to place orders for various genetic tests



2023 estimated cost savings (based on Medicare Pricing Guide)

- Direct Patient savings	$37,830.16
- Opportunities*	$495,732.65
- Institutional savings	$578,839.41
- Estimated total savings	$1,112,102.22

*The University of Missouri has a policy to NOT bill patients with private insurance if testing reimbursement was denied due to lack of prior-authorization. This number represents that costs that was saved by completing prior-authorization appropriately for these patients.

VIII. Lab Utilization Working Committee (LUWC)

a. Initially established alongside LUC to integrate logistical, financial, and IT aspects of all LUC approved tests.
   i. Involves Supervisors, Managers of all areas of Pathology, Director of Supply Chain and Pathologists.
   ii. Created 4 Tier flowchart and SOP for area responsibilities and requirements for LUC approvals

Responsibility	Tier 1	Tier 2	Tier3	Tier 4
Placing RL Test Investigation	N/A	Clinician	N/A	N/A
Placing Order	Clinician	Pathology	Clinician	Clinician
Paperwork	Clinician	Clinician	Clinician	Pathology
Result Documentation	Clinician	Pathology	Pathology	Pathology
Kit Storage	Clinician	Clinician	Pathology	Pathology
Sample Collection	Clinician	Pathology	Pathology	Pathology
Sample Send-Out	Clinician	Pathology	Pathology	Pathology

b. LUWC has now grown to collaborate with all Pathology departments on various aspects of pathology testing
   i. Bi-Weekly meeting
   ii. MU Test Catalog updates
   iii. Reference Lab change requests
   iv. Multi-Disciplinary changes or implementation of testing
   v. Contracting/Legal/Supply Chain collaboration
      1. Attendees
         a. Dr. Ritter
         b. Dr. Walker
         c. Jason Sawyer
         d. Cody Buxton
         e. Christine Martin
         f. Caitlin Lenon-Davis
         g. Shanon Larson-Kosnopfal
         h. Amanda Ramsey
         i. Cisco Saenz
         j. Susan Poole
         k. Caleb Heid
         l. Tammy Dowdell
         m. Jordan Richards
         n. Michael Athey
         o. Karen Rugg
         p. Rob Hollinger

c. Accomplishments of 2023
   i. Successful reduction in phlebotomy patient wait time due to elimination of Lab Assistant guess work
   ii. Reduction of surprise billing to Laboratory Budget or Patient
   iii. Creation of 3rd Party orders in PowerChart and full interphases built to improve order and billing accuracy while reducing resulting wait times