

Supplementary Table S1 Send-out laboratory test group assignment

Control (n = 331)	TAT (h)	Charge (\$)	Intervention (n = 336)	TAT (h)	Charge (\$)
1,5 Anhydroglucitol Quant, Serum/Plasma	96	46.65	(1,3)-Beta-D-Glucan (Fungitell)	48	70.00
11-Deoxycortisol Quantitative, Serum	120	26.99	5-HIAA, 24-h Ur	96	16.05
17-Alpha-OH Progesterone	96	19.32	Acetoacetate	48	19.04
17-OH-Pregnenolone	96	26.99	Acid Phosphatase, Prostatic EIA	24	11.35
21-Hydroxylase Antibody	240	44.65	Adenovirus Ab, CSF	120	75.34
5' Nucleotidase	48	11.93	Adenovirus Antibody, Serum	192	79.00
AccuType IL28B	96	177.97	Adenovirus DNA Quant PCR	96	182.75
Acetylchol Recep Modulating Ab	168	35.49	Admark Phospho-Tau Total/Ab42	336	621.34
Acetylchol Recept Blocking Ab	96	29.75	AFP and AFP-L3	120	85.00
Acetylchol Receptor Binding Ab	72	26.93	Albumin, Body Fluid	96	6.83
ADAMTS13 Activity	168	142.00	Alcohol, Urine, Quantitative Confirmation	72	19.04
Adenosine Deaminase, CSF	96	30.94	Alder, European IgE	120	3.50
Adenosine Deaminase, RBC	96	59.71	Alk Phos Isoenzymes & Total	144	72.45
Adrenal Antibody	120	110.20	Alkaline Phosphatase, Bone Spec	24	25.00
Aldosterone, Urine	720	173.28	AlloMap Molecular Testing	96	2,783.93
Aldosterone, Serum	792	123.77	Alpha-Fetoprotein, Peritoneal	240	90.41
Alfa IgE	120	105.00	Alpha-Fetoprotein, Pleural Fl	240	116.78
Allergen (IgE), Conv.-Artichoke	24	12.00	Alpha-Fetoprotein, CSF	24	10.82
Alpha Subunit, Pituitary Glycoproteins	48	4.25	Alpha-Globin Common Mutation	168	460.00
Alpha-1-Antitrypsin	384	98.55	Amer Cheese, Cheddar (F81) IgE	48	4.25
Alpha-1-Antitrypsin Phenotype	24	9.45	Amphetamines, Urine, Quantitative Confirmation	72	32.41
Alpha-1-Antitrypsin, Feces, Rand	96	20.00	Angioedema Panel, Hereditary	192	158.35
Aluminum	72	52.00	Anti-Mullerian Hormone	72	50.00
Aluminum, 24-h Urine	96	11.65	Antistreptolysin O Screen	24	9.38
Amiodarone	216	11.65	ApoE Genotype Analysis	168	80.75
Amitriptyline	96	15.62	Apolipoprotein A1 & B	24	24.06
Amylase Isoenzymes	120	25.30	Arginine Vasopressin Hormone	264	25.27
Amylase, Body Fluid	24	15.36	Ash, Arizona IgE	120	3.50
Anaplasma Phagocytophilum (HGA), IgG/IgM	48	9.10	Australian Pine Tree (T73) IgE	48	4.25
Androstenedione	120	54.20	B pertussis IgA, IgG (FHA/PT)	72	175.00
Angiotensin Converting Enzyme, CSF	96	27.58	Bahia Grass (G17) IgE	48	4.25
Anti-68 kd (HSP-70)	120	22.42		72	49.84

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Supplementary Table S1 (Continued)

Control (n = 331)	TAT (h)	Charge (\$)	Intervention (n = 336)	TAT (h)	Charge (\$)
			Barbiturates, Urine, Quantitative Confirmation		
Antimic Susc, AFB M.Avium MIC	192	108.72	Barley (F6) IgE	48	4.25
Antimicrob AFB, Primary Panel	48	18.00	Basil (F269) IgE	48	4.25
Antithrombin III Antigen	48	4.25	Beech (T5) IgE	48	4.25
Apple (F49) IgE	48	4.25	Beef (F27) IgE	48	4.25
Apricot IgE	120	73.95	Benzodiazepines, Urine, Quantitative Confirmation	72	33.02
Arsenic Fractionation, Urine	72	13.09	Beta-Hydroxybutyrate	72	17.20
Arsenic, Blood	144	14.96	Bicarbonate, Urine	24	7.68
Arylsulfatase A	408	331.44	Bilirubin, Total, Body Fluid	48	7.10
Asparagus IgE	48	4.25	Black Pepper (F280) IgE	48	4.25
Aspergillus Ab Panel ID	96	9.59	Blastomyces dermatitidis Abs Immunodifsn	96	10.50
Aspergillus amstelodami IgE	120	3.50	Bluegrass, Canada IgE	120	3.50
Aspergillus nidulans IgE	120	3.50	Bran, Wheat IgE RAST	120	3.50
Aspergillus Precipitins, ID CSF	144	86.10	Brome Grass (G11) IgE	48	4.25
Avocado (F96) IgE	72	14.51	Brucella Antibody (IgG, IgM)	168	108.00
Banana (F92) IgE	48	4.25	Buckwheat (F11) IgE	48	4.25
Bartonella Antibodies, CSF	48	4.25	Buprenorphine and Metabolites, Urine Quantitative	24	40.00
Bartonella DNA, PCR	96	193.31	Cacao (Chocolate) (F93) IgE	48	4.25
Bartonella Henselae Ab IgG IgM	120	130.00	Candida Ab by ID	96	10.50
Beta-2 Microglobulin, Rand Ur	192	19.30	Candida albicans (M5) IgE	48	4.25
Beta-2 Transferrin	48	4.25	Carnitine, LC/MS/MS	96	26.25
Beta-2-Glycoprotein	48	4.25	Casein (F78) IgE	48	4.25
Bile Acids, Fractionated/Total	24	20.00	Cathartic Laxative Stool Panel	240	106.00
Biotinidase	24	12.22	CEA, CSF	168	91.34
Black Olive (Rf342) IgE	96	68.43	CEA, pericardial fluid	72	91.34
Blackberry (f211) IgE	48	38.00	CEA, peritoneal fluid	72	91.34
Blueberry (Rf288) IgE	144	85.43	Centromere B Antibody	72	55.00
BRCAvantage, Ashkenazi Jewish Screen	144	28.37	Cephalos acremonium (M202) IgE	48	4.25
Broccoli (F260) IgE	48	4.25	Chestnut (F299) IgE	48	4.25
Brussel Sprouts (Rf217) IgE	48	4.25	Chicken (F83) IgE	48	4.25
C1Q Binding Assay	192	500.00	Chili Pepper (F279) IgE	48	4.25
C1q Complement Component	48	4.25	Chromium, Serum	96	14.24
C2 Complement Component	24	20.00	Chylomicron Screen, Body Fluid	192	29.03
C5 Complement Component	192	15.62	Cinnamon (F220) IgE	48	4.25
C6 Complement Component	240	79.48	CK Isoenzymes with Total CK	72	19.32

Supplementary Table S1 (Continued)

Control (n = 331)	TAT (h)	Charge (\$)	Intervention (n = 336)	TAT (h)	Charge (\$)
C7 Complement Component	240	27.33	Cocaine Metabolite, Urine, Quantitative Confirmation	72	25.40
C8 Complement Component	192	24.12	Coccidioides Antibody, CF, CSF	72	9.38
C9 Complement Component	840	60.00	Coccidioides Antibody, CF, Ser	120	9.38
Cabbage IgE	264	127.00	Cockroach, American IgE	48	4.25
Cadmium, 24-h Urine	288	127.00	Coffee (F221) IgE	48	4.25
Cadmium, Blood	264	127.00	Collagen Type I C-Telopeptide	96	25.00
CAH Panel 1	48	4.25	Conv.Rast-Parmesan Cheese (IgE)	120	7.22
Calcitonin	72	12.50	Corticosterone	120	25.06
Calprotectin, Stool	72	12.50	Coxsackie A Ab Panel	192	77.70
Cantaloupe/Muskmelon IgE	120	630.85	Coxsackie B Ab Panel	120	39.00
Carotene	48	18.51	Coxsackie B Ab Panel, CSF	120	153.90
Carrot (F31) IgE	72	60.00	Creatine, serum	96	75.00
CastorBean (K71) IgE	48	4.25	Creatinine, Body Fluid	48	6.83
Catecholamines, Fract, 24-h Ur	72	12.92	Creutzfeldt-Jakob Disease, CSF	720	70.88
Catecholamines, Fract, Plasma	48	4.25	Cryofibrinogen	168	48.43
Cauliflower (F291) IgE	48	20.00	Cultiv Wheat Pollen (G15) IgE	48	4.25
Cedar, Mountain	96	20.00	Cultivated Rye (G12) IgE	24	20.00
Celery (F85) IgE	96	30.92	Cumin IgE	120	3.50
Cherry (F242) IgE	48	4.25	Cystine, Quant 24-h Urine	240	80.36
Chick Pea IgE Rast	48	4.25	Cystine, Quant Random Urine	120	80.36
Chlamydia Ab Panel	48	4.25	D.microceras IgE	48	4.25
Chlamydia Trachomatis Culture	48	4.25	Dengue Fever Virus Antibody, IgM	120	16.18
Cholesterol, Body Fluid	48	4.25	Des-gamma-carboxy Prothrombin	120	95.10
Chromogranin-A	96	43.08	DHT, LC-MS/MS	96	28.56
Chronic Lymphocytic Leuk, IgVH (Quest)	144	137.15	Dihydropolipamide dehydrogenase	336	283.00
Citric Acid, Serum or Plasma	48	8.25	DNase-B Antibody	96	8.82
Citric Acid, Urine	144	32.30	Dog Fennel (w46) IgE	48	4.25
Clomipramine	336	382.50	Echinococcus Ab (IgG), w/Refl	120	17.60
Clonazepam	192	143.00	Egg White (F1) IgE	48	4.25
Clozapine	96	11.08	Egg Yolk (F75) IgE	48	4.25
Co-GM1 Triad Autoantibody	120	20.47	Ehrlichia/Anaplasma by PCR	72	171.70
Coconut (F36) IgE	120	25.27	Elm, Chinese IgE	120	3.50
Coenzyme Q10, Total	72	19.32	Entamoeba Histolytica Ag, EIA	48	18.90
Complement Activity, Alternative Pathway	336	552.50	Enterovirus RNA Qual	96	160.00
Complement, Total (CH50)	48	4.25	Ethyl Glucuronide/EthylSulfate	120	36.40

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Supplementary Table S1 (Continued)

Control (n = 331)	TAT (h)	Charge (\$)	Intervention (n = 336)	TAT (h)	Charge (\$)
Connexin 26, Single	120	58.89	Euglobulin Lysis Time	120	90.25
Conv. Rast- Pinto Bean (IgE)	144	168.00	Factor VIII Inact/Inhib Human	72	20.00
Conv.-Aspergillus Terreus (IgE)	336	68.11	False Ragweed (W4) IgE	48	4.25
Copper, 24-h Urine	48	11.37	Familial Hyperinsulinism	336	875.00
Copper, Serum or Plasma	504	411.19	Felbamate	96	16.45
Copper, RBC	72	9.69	Fibrinogen Degrad Prod (FDP)	48	34.11
Cortisol, Free urine	192	66.00	Flecainide	120	24.35
Cryptococcus Antibody	72	8.16	Friedreich Ataxia (FXN) Repeat Expansion Test	240	537.57
Cucumber (F244) IgE	120	14.00	FSHD DNA	504	534.34
CV2 Autoantibody Test	48	77.63	Fusarium moniliformis (M9) IgE	48	4.25
CVID Confirmation Flow Panel	48	4.25	Galop Autoantibody	240	402.54
Cyanide, Blood	168	65.45	Garlic (F47) IgE	48	4.25
Cyclic Citrulline Peptide IgG	48	235.85	Gastrin	48	12.52
Cystatin C	120	30.64	Gelatin (c74) IgE	24	20.00
Cysticercosis Ab IgG by ELISA	24	6.00	Giardia lamblia Antibody, IFA	240	63.00
Cysticercus IgG Ab, WB	24	30.00	Ginger (Rf270) IgE	48	4.25
Dehydroepiandrosterone, Serum	192	18.19	Glomerular Basement Memb IgG	48	22.74
Delta ALA, Random Urine	240	158.21	Glucagon	120	135.92
Delta-ALA, 24-h Urine	96	11.00	Gluten (F79) IgE	48	4.25
Desoxycort, 11-Compound S, Metyr	144	119.99	Glycogen Storage Type 1a	240	269.88
Dog Epithelium IgE	72	107.10	Glycyphagus domesticus IgE	48	4.25
Drug Screen/Nonforensic, Serum	240	22.05	Goat Milk (F300) IgE	48	4.25
E. histolytica (amebiasis), Ab, IgG	48	4.25	Goose Feathers (E70) IgE	48	4.25
EBV Ab to Viral Capsid Ag, IgA	96	61.10	GQ1b Autoantibody	240	152.80
EBV-VCA IgG, CSF	120	9.65	Halibut (F303) IgE	48	4.25
Echovirus Ab Panel, CSF	192	46.86	Hantavirus Antibodies, ELISA	144	95.00
Electrolytes, Feces (Timed)	96	9.10	hCG, Total, CSF	48	14.79
Epidermal Abs W/Reflex Titers	120	189.60	Hemoglobin, Free, Plasma	48	14.79
Estradiol, Esoterix	120	34.05	Hemosiderin, Urine	24	10.23
Estriol, LC/MS/MS, Serum	72	103.04	Hepatitis Delta Antibody	120	12.10
Estrogens, Total	192	38.70	Hepatitis Delta Virus (HDV), IgM Ab, EIA	192	88.30
Estrone	48	102.00	Hepatocellular Carcinoma Panel	120	410.00
Ethosuximide (Zarontin)	288	23.40	Hereditary Hemochromatosis DNA Mutation Analysis	168	78.84
Ethylene Glycol, Blood	96	29.54	Histamine, random urine	120	23.29

Supplementary Table S1 (Continued)

Control (n = 331)	TAT (h)	Charge (\$)	Intervention (n = 336)	TAT (h)	Charge (\$)
Factor XIII Activity	120	14.48	Histamine, Whole Blood	120	23.29
Fanconi Anemia Group C	96	30.64	Histoplasma Ab Panel CF, CSF	120	88.25
Fatty Acid Profile, Essential	192	127.50	Histoplasma Antibody, ID, CSF	48	62.42
Fatty Acids, Free	240	269.88	Histoplasma Antibody, ID, Se	96	9.95
Fecal Lipids, Total	240	100.00	Histoplasma Antibody, CF	120	107.10
Fetomaternal Bleed, Flow Cyto	96	47.69	Histoplasma Antigen, Urine	192	78.00
Filaria IgG4 Antibody	72	134.94	HIV-1 DNA, Qualitative PCR - Infants Only	120	97.33
Fluoride Quantitative, Serum or Plasma	168	82.60	HIV-1 Genotype	168	220.00
Folate, RBC	48	4.25	HIV-1 Genotype, RTI, PI	168	880.00
Folate, Serum	240	108.00	HIV-1 RNA, Quant RTPCR, CSF	96	295.00
Francisella tularensis Ab	144	15.33	HIV1 Integrase Genotype	240	440.00
Fructosamine	144	71.90	HLA-B27, DNA Typing	120	112.52
Gabapentin	120	43.99	Homovanillic Acid, Rand Ur	72	166.03
Galactokinase, Blood	24	9.10	Honey (Rf247) IgE	48	4.25
Galactose-1-Phosphate	96	15.77	Hop-Hornbeam (Ironwood) IgE	120	3.50
Gamma-Hydroxybutyric Acid	168	68.44	Hops IgE	48	4.25
Ganciclovir, HPLC	120	104.36	House Dust (Greer) (H1) IgE	48	4.25
Glucose-6-Phosphate Dehydrogenase	240	165.00	HTLV I/II Antibodies, CSF	96	10.50
Glucose, Body Fluid	144	144.00	HTLV I/II DNA Qual, RT-PCR	120	223.70
Glutamic Acid Decarboxylase Antibody	48	16.92	HTLV-I/II Antibody w/Reflex	48	109.20
Grape (F259) IgE	48	6.25	Hu Autoantibody	168	405.00
Grapefruit (F209) IgE	72	36.32	Hypersensitivity Pneumonitis	168	169.00
Green Pepper (F263) IgE	48	4.25	Hypoglycemic Panel serum/plasm	144	36.98
Growth Hormone Releasing Horm	48	4.25	IGF Binding Protein-1	240	122.00
Growth Hormone, Serum	240	260.00	IGF Binding Protein-3(IGFBP-3)	48	15.62
Guinea Pig Epithelium IgE	48	13.35	IGF-I, LC/MS (Somatomedin-C)	48	8.00
H Pylori Urea Breath Test	48	4.25	Imipramine	120	20.42
H. Influenzae B Ab, IgG	96	59.50	ImmunoKnow West Coast	120	165.00
HE4, Ovarian Cancer Monitoring	48	10.50	ImmunoCAP- Catfish (IgE)	48	4.25
Heavy Metals Panel, 24-h Ur	192	89.15	ImmunoCAP- Millet (IgE)	48	4.25
Hepatitis E Virus Ab, IgG by ELISA	72	32.39	Inhibin-A (DIMER)	48	23.29
Hepatitis E Virus Ab, IgM by ELISA	192	25.50	Insulin Like Growth Factor II	192	63.75
Herpes Simplex ½ Ab IgM IFA	192	28.05	Interleukin-1 Beta	96	72.25

(Continued)

Supplementary Table S1 (Continued)

Control (n = 331)	TAT (h)	Charge (\$)	Intervention (n = 336)	TAT (h)	Charge (\$)
Herpes Simplex Virus ½ IgG Antibody, CSF	72	11.31	Interleukin-6, Highly Sensitive	96	65.00
Herpesvirus 8 IgG Antibody	168	172.20	Iodine, 24-h Urine	72	100.00
Histone Antibody, IgG	144	10.80	Iodine, Serum	120	58.34
Horse Dander (E3) IgE	48	4.25	Italian Cypress (t23) IgE	48	20.00
HSV 2 Igm Titer	24	15.73	JC Polyoma Virus DNA, CSF	120	298.00
Human Herpes Virus-6 Abs	72	54.36	JC Polyoma Virus DNA, plasma	120	323.00
Human Herpes Virus-6, RT-PCR, Blood	120	115.50	JC Polyoma Virus DNA, urine	120	298.00
IA-2 Antibody	120	153.43	JO-1 Antibody	48	18.49
IC-Tangerine/Mandarin IgE	240	50.00	June (KY Blue) Grass (G8) IgE	48	4.25
IgG Subclasses Profile	72	30.00	Kappa/Lambda Light Ch, Random	48	283.00
ImmunoCAP- Lima Bean (IgE)	240	260.95	Kappa/Lambda Light Chains, 24Hr	120	283.00
Immunofixation, CSF	96	19.04	Kappa/Lambda Light Chains, Free	96	23.00
Immunoglobulin D	120	34.47	Kochia (Firebush) IgE	48	4.25
Imported Fire Ant (I70) IgE	192	139.29	Lactoferrin, Fecal by ELISA	48	24.31
Insulin Antibody	72	20.01	Lamb (F88) IgE	48	4.25
Interleukin-2 Receptor	48	4.25	Lamotrigine	24	8.00
Intrinsic Factor Blocking Antibody	96	85.00	Latex (k82) IgE	48	4.25
Kiwi Fruit (F84) IgE	48	7.10	Legionella Pneumophila Ab, IgG	168	10.23
Lacosamide, Serum or Plasma	192	36.32	LEMS Autoantibody	336	207.44
Lactate Dehydrogenase, Body Fl	48	17.60	Leptin	120	51.00
Lactate/Pyruvate	72	8.76	LHON mtDNA Mutation Profile	504	867.79
LD Isoenzyme Panel	48	6.19	Lipoprotein (a)	24	7.00
Lead, 24-h Urine	144	63.86	Luteinizing Hormone (LH-ECL)	72	89.80
Lead, Whole Blood	48	4.25	Luteinizing Hormone (LH), Pediatric	72	20.70
Leflunomide Metabolite, Serum/Plasma	48	4.25	Lyme Disease Ab Index for CNS	168	623.15
Lemon (F208) IgE	48	4.25	Lyme Disease EIA/WB	72	8.33
Lentil (F235) IgE	24	12.00	MAG Dual Antigen Autoantibody	192	51.37
Lettuce (F215) IgE	48	7.68	Maize/Corn (f8) IgE	48	4.25
Levetiracetam	72	24.12	Malt (F90) IgE	48	4.25
Lipase, Body Fluid	192	70.30	Manganese	120	13.63
Lipoprotein by NMR	72	13.35	Mata Autoantibody	240	261.99
Listeria Antibody, Serum by CF	120	14.03	Meadow Fescue (G4) IgE	48	4.25
	192	76.87	Melaleuca Tree (T21) IgE	48	4.25

Supplementary Table S1 (Continued)

Control (n = 331)	TAT (h)	Charge (\$)	Intervention (n = 336)	TAT (h)	Charge (\$)
Liver Kidney Microsome Ab IgG					
Lysozyme, Serum	48	4.25	MEN2 & FMTC Mutations	504	425.54
Macroprolactin	240	269.88	Mesquite (T20) IgE	48	4.25
Mango Fruit (F91) IgE	24	4.25	Methadone and Metabolite, Urine, Quantitative Confirmation	72	36.55
Maple Syrup Urine Disease	240	2,435.15	Methylenetetrahydrofolate Redutase (MTHFR) DNA Mutation Analysis	144	67.47
Melons (F87) IgE	72	10.54	Methylmalonic Acid, Serum	72	11.00
Meningoencephalitis, CSF	48	8.27	Methylmalonic Acid, Urine	72	21.42
Mercury, 24-h Urine	48	21.00	Methylphenidate	168	51.00
Mercury, Blood	96	20.00	Mucor plumbeus IgE	120	3.50
Metanephrines, Fract, 24-h Ur	48	119.10	Mucor racemosus (M4) IgE	48	4.25
Metanephrines, Fract, Free, Pl	168	98.00	Mumps Virus Antibody (IgM)	120	10.67
Metanephrines, Fract, Rand Ur	48	4.25	Mustard (F89) IgE	48	4.25
MI-2 Autoantibodies	48	4.25	Myelin Basic Protein, CSF	96	24.85
Mosquito (I71) IgE	24	20.00	Myocardial Ab Screen w/Reflex	96	15.90
Mouse Epithelia (E71) IgE	48	4.25	Myoglobin, Serum	24	11.93
Mouse Serum Proteins IgE	48	4.25	Myoglobin, urine	24	10.52
Mouse Urine Proteins IgE	336	819.00	Myotonic dystrophy, Type 2	672	618.17
Mushroom (F212) IgE	120	156.19	Neisseria Meningitidis IgG Vac	192	181.92
MuSK Quantitative Titers Ab	72	76.41	Neuromyelitis Optica IgG Autoab	144	150.00
Mycobacteria PCR, Blood	72	18.50	Neuron-Specific Enolase	96	27.57
Mycoplasma Pneumoniae IgG, CSF	504	353.21	Neutrophil Associated Antibodies	120	60.72
Mycoplasma pneumoniae IgG, IgM	96	65.00	Neutrophil Function, Oxid Burst	72	136.00
Myotonic Dystrophy 1 DNA Test	192	168.00	Niacin (Vitamin B3)	240	80.00
N-Telopeptide Serum	360	136.00	Norepinephrine, Plasma	96	157.67
N-Telopeptide, random urine	96	102.24	Nutmeg (Rf282) IgE	48	4.25
N-Telopeptide, Urine 24 h	504	27.00	Oak (Occupational) IgE	120	3.50
Nabferon (IFN-b) Antibody	120	1,045.00	Oak, Red IgE	144	21.53
Neisseria Gonorrhoeae Ab	120	25.40	Oat (F7) IgE	48	4.25
Neopterin, Total CSF	192	25.00	Oligoclonal Bands in CSF & serum	144	51.30
Neosensory Neuropathy Paraneo	144	55.00	Opiates, Urine, Quantitative Confirmation	72	23.00
Nicotine and Cotinine, Serum	120	14.48	Oregano (F283) IgE	48	4.25
Nicotine and Cotinine, Urine Quantitative	48	4.25	Ovarian Antibody Screen/Titer	168	87.82
Nortriptyline	48	4.25	Oxalate, Plasma	192	86.06

(Continued)

Supplementary Table S1 (Continued)

Control (n = 331)	TAT (h)	Charge (\$)	Intervention (n = 336)	TAT (h)	Charge (\$)
Onion (F48) IgE	48	4.25	Oxalate, Urine	96	17.47
Orange (F33) IgE	96	30.00	Oxcarbazepine Metabolite	48	22.48
Osteocalcin, N-MID (Bone Gla)	96	35.00	Paprika (f218) IgE	24	20.00
Pancreatic Elastase-1, stool	264	74.06	Parsley (F86) IgE	48	4.25
Pancreatic Polypeptide	48	4.25	Parvovirus B19 Ab Panel	72	24.12
Papaya (Rf293) IgE	216	286.15	Parvovirus B19 DNA, PCR serum	96	78.10
Paraneoplastic Autoab, CSF	216	26.18	Pecan Tree (T22) IgE	48	4.25
Paraneoplastic Autoab, Serum	24	20.00	Pepper, Red IgE	120	3.50
Parrot/Parakeet Feathr(E78) IgE	48	4.25	Peppertree (Rt217) IgE	48	4.25
Peach (F95) IgE	48	4.25	Perennial Rye (G5) IgE	48	4.25
Pear (F94) IgE	48	4.25	Phencyclidine (PCP), Urine, Quantitative Confirmation	72	41.60
Peas (F12) IgE	120	39.74	Phoma betae (M13) IgE	48	4.25
Phenylalanine	48	4.25	Phospholipids	96	21.02
Pineapple (F210) IgE	96	17.60	Pine, Western White IgE	120	3.50
Plasminogen Activity	48	4.25	Platelet Ab, Direct (IgG)	72	48.92
Plum (f255) IgE	144	283.69	Poliovirus 1, 2, 3 Ab (Immune Status)	216	65.45
PML/RAR Alpha t(15:17) PCR	336	442.00	Poppy Seed (Rf224) IgE	48	4.25
PMP22 Dup/Del DNA (CMT1A)	96	27.82	Pork (F26) IgE	48	4.25
Porphobilinogen, Quant, 24Hr	168	62.26	Privet Tree (T210) IgE	48	4.25
Porphobilinogen, Random Urine	168	35.76	Progensa PCA3	96	250.00
Porphyrins Evaluation, WB	120	104.51	PROMETHEUS Anser IFX	96	2,500.00
Porphyrins, Feces	120	24.27	PROMETHEUS IBD sgi Diagnos	96	517.44
Porphyrins, Fract, Quant, 24Hr	144	40.00	PROMETHEUS TPMT Genetics	336	296.25
Posaconazole, Quantitative by LC-MS/MS	48	4.25	Protein C, Total Antigen	48	12.50
Potato (F35) IgE	144	58.44	Q Fever Abs with reflex titers	144	51.00
Pregabalin	192	97.86	RBC Fragility - Incubated	24	26.75
Prekallikrein Factor, Activity	24	14.20	Reducing Substances Stool	24	9.65
Primidone	24	31.24	Renin Activity	48	12.00
Procainamide	192	65.00	Reptilase Time	48	22.74
Procollagen Type I Propeptide	144	27.35	Retinol Binding Protein	96	14.20
Proinsulin, Intact	96	262.50	Rhizopus Nigricans (M11) IgE	48	4.25
PROMETHEUS FibroSpect II	72	44.41	Rice (F9) IgE	48	4.25
Protein S Antigen, Free	48	18.94	Rye (F5) IgE	48	4.25
Protein S Antigen, Total	24	6.83	Sage (f344) IgE	48	4.25
Protein, Total, Body Fluid	840	1,127.85	SALIVARY CORTISOL	24	36.32

Supplementary Table S1 (Continued)

Control (n = 331)	TAT (h)	Charge (\$)	Intervention (n = 336)	TAT (h)	Charge (\$)
PTEN (Harmartoma Tumor Syndrome, Autism with macrocephaly), Full Gene Sequencing	48	56.85	Salmon (F41) IgE	48	4.25
PTH-Related Protein (PTH-RP)	48	44.41	Schistosoma Antibody, IgG	192	41.23
Pyruvate Kinase	48	27.27	Scleroderma (Scl-70) (ENA) Antibody, IgG	48	11.93
Pyruvate, CSF	48	4.25	Serotonin Release Assay	96	332.00
Rabbit Epithelium (E82) IgE	216	124.95	Sex Hormone Binding Globulin	24	6.00
Raji Cell Immune Complex Assay	48	4.25	Snapper, Red IgE	48	4.25
Raspberry (Rf343) IgE	48	4.25	Sole (Rf337) IgE (38243Z)	48	4.25
Rat Epithelium (E73) IgE	24	20.00	Soluble Liver Antigen Antibody, IgG	96	12.20
Rat Serum Proteins (E75) IgE	48	4.25	Soluble Transferrin Receptor	24	19.19
Rat Urine Proteins (E74) IgE	48	4.25	Somatostatin	312	194.00
Red Kidney Bean (F287) IgE	96	20.26	Spinal Muscular Atrophy Diag	240	600.18
Reverse T3	336	340.00	Spinal Muscular AtrophyCarrier	336	875.00
Ri Autoantibody	48	18.49	Spinocerebellar Ataxia Type 10	480	382.89
Ribosomal P Protein Ab	120	216.30	ssDNA IgG Antibody	96	17.89
Rickettsial Abs IgG/IgM/Titer	120	40.29	Stone Analysis	96	13.00
Risperidone & Metabolite	24	18.50	Strongyloides Ab, IgG by ELISA	96	23.00
Rubella Abs (IgG, IgM) Diag	120	51.13	Substance Abuse Panel 7–50+	72	149.60
Salmonella, Total Antibody	48	7.00	Sunflower Seed (k84) IgE	48	4.25
Selenium	240	2,870.00	Sweet Vernal Grass (G1) IgE	48	4.25
Sensorimotor Neuropathy Comp	240	1,935.00	T3 Autoantibody	120	138.10
Sensory Neuropathy Profile-xp	120	22.00	T4 (Thyroxine) Antibody	216	148.00
Serotonin, Serum	48	4.25	Tay-Sachs, Mutation Analysis	240	220.47
Spinach (F214) IgE	144	14.96	Tetanus Antibody, IgG	48	13.55
Squash/Pumpkin IgE	48	4.25	THC Metabolite, Urine, Quantitative Confirmation	72	29.54
Strawberry (F44) IgE	120	62.00	Thiopurine Metabolites	168	129.78
Strep pneumoniae IgG (23 sero)	120	13.07	Thiopurine Methyltransferase, RBC	96	75.00
Striated Muscle w/reflex titer	288	157.36	Thyroglobulin Antibody (RIA)	48	27.00
Succinylacetone, Urine	168	134.59	Thyrotropin Binding Inhibitory IG	192	169.05
Sulfonylurea Hypoglycemics, Ur	48	4.25	Thyrotropin Receptor Antibody	48	28.56
Sweet Potato (f54) IgE	48	9.10	Thyroxine Binding Globulin	96	13.80
T4, Free (Pediatric)	48	4.25	Tilletia Tritici	96	3.50
	240	22.00	Topiramate	24	25.65

(Continued)

Supplementary Table S1 (Continued)

Control (n = 331)	TAT (h)	Charge (\$)	Intervention (n = 336)	TAT (h)	Charge (\$)
Testosterone, Bio w/SHBG, Female/Child					
Testosterone, Free and Total by Dialysis, Men	144	35.00	Toxoplasma gondii Ab, IgA, ELISA, Serum	216	169.00
Testosterone, Free, Total and SHBG (Women & Children/Men w/Androgen Deficiency)	96	20.00	Toxoplasma Gondii DNA, PCR	120	78.10
Testosterone, Free, Total and SHBG, Men	24	12.00	Toxoplasma gondii IgG, CSF	288	9.65
Thyroid Stimulating Immunoglobulins	120	20.00	Tramadol, Urine, Quantitative	72	78.00
Tomato (F25) IgE	48	4.25	Tropheryma Whippelli DNA, Qual	72	320.72
Toxocara Antibody IgG by ELISA	120	108.20	Trout (F204) IgE	48	4.25
Transferrin, Carb-deficient	192	92.44	Trypanosoma Cruzi Ab, Total	144	115.16
Transthyretin DNA Sequencing	240	403.75	Tuna (F40) IgE	48	4.25
Trichinella Antibody, IgG by ELISA	168	42.76	Turkey Meat (F284) IgE	48	4.25
Tricyclic Antidepressants, Urine, Quantitative	72	31.24	Vanilla (F234) IgE	48	4.25
Trypsin (Trypsinogen)	120	23.57	Varicella IgG	24	9.00
Tryptase	96	16.00	Varicella-Zoster Virus IgM Ab	120	9.25
TSC Familial Mutation Eval	672	3,500.00	Vasoactive Intestinal Polypeptide	168	32.43
Tuberculosis Interferon Gamma	96	110.24	VGKC Antibody Test	336	261.32
Tumor Necrosis Factor-Alpha	168	184.21	Viscosity, Serum	72	80.35
Tyrosine, Plasma	120	39.74	Vitamin B1 (Thiamine), Wh Blood	120	9.00
Usher Syndrome Type IF	336	140.00	Vitamin B6	96	7.00
Usher Syndrome Type III	336	140.00	VITAMIN D, 1,25-DIOH	168	18.00
Vitamin B12 Binding Capacity	120	18.49	Vitamin K1, Serum	168	36.98
Vitamin B2 (Riboflavin)	144	36.42	Von Willebrand Factor Antigen	72	23.93
Vitamin C	144	19.02	von Willebrand Factor Multimers	264	56.74
VMA, 24-h Urine	48	43.00	vWf: Ristocetin Co-Factor	72	26.27
VMA, Rand Ur	48	43.00	VZV Ab IgG, CSF	96	13.23
Volatiles	48	19.04	Walnut, Black IgE	120	3.50
Voriconazole, Quantitation by LC-MS/MS	144	48.00	Wheat, Western IgE	120	3.50
Watermelon (Rf329) IgE	48	4.25	Whey (F236) IgE	48	4.25
West Nile Virus	144	28.44	White Pine (T16) IgE	48	4.25
West Nile Virus (IgG, IgM) CSF	144	37.54	Willow (T12) IgE	48	4.25
West Nile Virus RNA, Qual Blood	120	100.00	Wormwood (W5) IgE	48	4.25

Supplementary Table S1 (Continued)

Control (n = 331)	TAT (h)	Charge (\$)	Intervention (n = 336)	TAT (h)	Charge (\$)
White Bean (F15) IgE	24	4.25	Yeast IgE (f45)	24	20.00
Zonisamide	96	37.34	Yo Autoantibody	240	146.66
			Zika Virus IgM	24	135.00
			Zika Virus RT-PCR (serum)	24	110.00
			Zika Virus RT-PCR Ur reflex to IgM Serum	24	110.00
			Zinc, 24-h Urine	72	40.40
			Zinc, Serum or Plasma	72	4.00

Abbreviations: ELISA, enzyme-linked immunosorbent assay; CSF, cerebrospinal fluid; CNS, central nervous system; IgG, immunoglobulin G; PCR, polymerase chain reaction.

Supplementary Table S2 Demographic characteristics, by study group

	Inpatient		Ambulatory	
	Control group	Intervention group	Control group	Intervention group
Discrete patient encounters, No.	12,756	10,010	85,478	101,363
Discrete patients, No.	10,463	8,308	57,575	67,383
Patient mean age, y	49.55	51.03	45.67	48.44
Female, %	48.00%	50.93%	62.36%	58.65%
Authorizing provider, No.	1,070	1,078	2,148	2,397
Ordering provider, No.	2,208	2,118	1,596	1,658

Supplementary Table S3 Top 10 send-out tests with largest aggregate order volume and costs by study period

<i>By volume</i>		
<i>Inpatient</i>	<i>Volume, no. (cost, dollars)</i>	
<i>Test name</i>	<i>Baseline</i>	<i>Postintervention</i>
Vitamin B1 (Thiamine), Wh blood	2,058 (18,522.00)	1,888 (16,992.00)
Zinc, serum or plasma	1,616 (6,464.00)	1,414 (5,656.00)
Beta-2-glycoprotein	515 (19,570.00)	576 (21,888.00)
Calprotectin, stool	505 (30,300.00)	469 (28,140.00)
Stone analysis	476 (6,188.00)	476 (6,188.00)
Histoplasma antigen, urine	457 (35,646.00)	467 (36,426.00)
Methylmalonic acid, serum	466 (5,126.00)	454 (4,994.00)
Copper, serum or plasma	441 (3,598.56)	329 (2,684.64)
Beta-hydroxybutyrate	470 (8,084.00)	167 (2,872.40)
Vitamin B6	353 (2,471.00)	273 (1,911.00)
<i>Ambulatory</i>	<i>Volume, no. (cost, dollars)</i>	
<i>Test name</i>	<i>Baseline</i>	<i>Postintervention</i>
Cyclic citrulline Ab IgG	5,678 (34,068.00)	6,308 (37,848.00)
Kappa/lambda light chains, free	5,357 (123,211.00)	6,266 (144,118.00)
Methylmalonic acid, serum	4,516 (49,676.00)	4,331 (47,641.00)
Testosterone, free, total and SHBG, men	4,050 (48,600.00)	4,247 (50,964.00)
Vitamin B1 (thiamine), Wh blood	2,975 (26,775.00)	3,340 (30,060.00)
Vitamin B6	2,666 (18,662.00)	2,885 (20,195.00)
Testosterone, free, total and SHBG (women and children/men w/androgen deficiency)	2,488 (49,760.00)	2,803 (56,060.00)
Beta-2-glycoprotein	2,421 (91,998.00)	2,866 (108,908.00)
Zinc, serum or plasma	2,523 (10,092.00)	2,603 (10,412.00)
Varicella IgG	2,507 (22,563.00)	2,605 (23,445.00)
<i>By cost</i>		
<i>Inpatient</i>	<i>Cost, dollars (volume, no.)</i>	
<i>Test name</i>	<i>Baseline</i>	<i>Postintervention</i>
Meningoencephalitis, CSF	431,021.55 (177)	289,782.85 (119)
Histoplasma antigen, urine	35,646.00 (457)	36,426.00 (467)
Lyme Disease Ab Index for CNS	38,635.30 (62)	26,172.30 (42)
Adenovirus DNA Quant PCR	27,778.00 (152)	31,981.25 (175)
Calprotectin, stool	30,300.00 (505)	28,140.00 (469)
Rickettsial Abs IgG/IgM/Titer	24,874.50 (115)	29,200.50 (135)
Admark Phospho-Tau Total/Ab42	29,824.32 (48)	15,533.50 (25)
Beta-2-glycoprotein	19,570.00 (515)	21,888.00 (576)
AFB Susc, M.avium complex panel	17,847.84 (103)	18,021.12 (104)
Parvovirus B19 DNA, PCR serum	18197.3 (233)	17572.50 (225)
<i>Ambulatory</i>	<i>Cost, dollars (volume, no.)</i>	
<i>Test name</i>	<i>Baseline</i>	<i>Postintervention</i>
SensoriMotor neuropathy profile with Recombx-Complete	401,800.00 (140)	456,330.00 (159)
N-telopeptide, random urine	271,320.00 (1,615)	239,400.00 (1,425)
HTLV-I/II antibody w/reflex	170,352.00 (1,560)	175,921.20 (1,611)
Kappa/lambda light chains, free	123,211.00 (5,357)	144,118.00 (6,266)

Supplementary Table S3 (Continued)

Calprotectin, stool	86,880.00 (1,448)	165,900.00 (2,765)
Beta-2-glycoprotein	91,998.00 (2,421)	108,908.00 (2,866)
Thyrotropin-binding inhibitory IG	89,089.35 (527)	94,329.90 (558)
MuSK quantitative titers Ab	81,900.00 (100)	93,366.00 (114)
Centromere B antibody	79,310.00 (1,442)	86,900.00 (1,580)
PCA3 prostate cancer biomarker	94,250.00 (377)	69,500.00 (278)

Abbreviations: CSF, cerebrospinal fluid; CNS, central nervous system; IgG, immunoglobulin G; PCR, polymerase chain reaction.