



PARTICIPANT STATISTICS

BACTERIOLOGY

SECOND QUADRIMESTER 2011

Specimen 1 - Urine - 24 year old Female, flank pain

Organisms	Extent 1	2	3	4	5
250 <i>Corynebacterium</i> sp., NOS			1	3	
470 <i>Proteus</i> sp., NOS	1	5	3		
472 <i>Proteus mirabilis</i>	3	16	15	11	
542 <i>Staphylococcus</i> sp., coagulase-negative, NOS			1		
690 Aerobe found, but referred for ID	43	2	2		
697 No pathogens isolated	2				
698 No aerobic growth	4				
891 Organism is gram-negative	4	2	17	4	
913 <i>Proteus</i> or <i>Pseudomonas</i>		2	11		
991 Growth of gram-negative organisms	22	5	5		
992 Growth of gram-positive organisms	1		1		
TOTAL PARTICIPANTS	77	19	56	23	11

Extent 1, 2 and 3 flagging appears for failure to report 470, 472, 690, 891, 913 or 991.
 Extent 4 and 5 flagging appears for failure to report 472.
 In addition to the required organism, participants in all extents may report 250, 253, 892, 992 and any of the codes listed in Extent 1, 2 and 3.

This urine had *Proteus mirabilis* and *Corynebacterium* sp.
 Protei are highly motile, even swarming bacteria with a pungent odor that reveals itself when the incubator is opened. Positive urea and phenylalanine tests prove it to be a *Proteus*, and negative indol proves it to be *mirabilis*. Motile anal flora migrate from anus to the bladder quickly and multiply. Pain is proof of cystitis.
 Do AST on the Urine Panel, as agents change quickly in institutions. Ampicillin or carbenicillin used to work. Diphtheroids are skin flora.

Specimen 2 - Throat - 5 year old Male, sore throat

Organisms	Extent 1	2	3	4	5
430 <i>Neisseria</i> sp., NOS		2			
562 <i>Streptococcus</i> sp., beta-hemolytic Gp A (<i>S. pyogenes</i>)	7	87	67	9	
563 <i>Streptococcus</i> sp., beta-hemolytic, not Group A			1		
587 <i>Streptococcus sanguis</i> type I			2		
662 Pos for beta-hemolytic strep screen		3	2		
663 Neg for Grp A strep screen by culture	1	2			
664 Pos for Grp A strep screen by culture	34	51	77	17	1
666 Pos for Grp B strep screen by culture		1			
690 Aerobe found, but referred for ID	1	1	1		
772 Pos for strep Group A antigen	2	7	1		
892 Organism is gram-positive	3		16		
TOTAL PARTICIPANTS	41	72	189	84	10

Extent 1, 2 and 3 flagging appears for failure to report 554, 562, 662, 664, 690, 772, 892 or 992.
 Extent 4 and 5 flagging appears for failure to report 562 or 664.
 In addition to the required organism, participants in all extents may report 430, 587 and any of the codes listed in Extent 1, 2 and 3.

This swab contained Gp. A *Streptococcus pyogenes*, *Streptococcus* sp. and *Neisseria* sp.
 The first week at nursery school yields a pandemic of pharyngitic throats, many of which are passed to mothers and siblings. The Direct Antigen Swab will reveal Type A in minutes; if it does not, redol If still negative, streak and stab a blood agar plate for review tomorrow. Type hemolytic colonies with polyvalent typing sera for A-F types, and report.
 This is a **Panic Value, Stat** organism that the pediatrician will probably treat with penicillin or erythromycin without AST. The alpha strep and diphtheroids are normal throat flora.

Specimen 3 - CSF - 7 year old Male, headache, fever

Organisms	Extent 1	2	3	4	5
350 <i>Haemophilus</i> sp., NOS		6	53	2	
355 <i>Haemophilus influenzae</i>			34	56	1
430 <i>Neisseria</i> sp., NOS		3		1	
436 <i>Neisseria meningitidis</i>			3		
542 <i>Staphylococcus</i> sp., coagulase-negative, NOS					
690 Aerobe found, but referred for ID	14	9	12	2	
692 No anaerobes isolated			3	1	
696 No aerobic growth on blood agar		2	1		
891 Organism is gram-negative	28	3	12	1	
TOTAL PARTICIPANTS	44	18	121	62	2

Extent 1, 2 and 3 flagging appears for failure to report 350, 355, 690, 692, 696 or 891.
 Extent 4 and 5 flagging appears for failure to report 355.
 In addition to the required organism, participants in all extents may report any of the codes listed in Extent 1, 2 and 3.

This specimen produced *Hemophilus influenzae*.
 This spinal fluid is automatically, **Panic Value** and **Stat**. A stained smear showing small gram negative paired rods is prognostic of "H flu." It is reported by phone to the doctor and he will start therapy. While this organism is much more common in boys than girls, maybe it is trauma-related. It doesn't kill with the speed of the pneumococcus. It requires culture on X and V factor chocolate agar, for ID confirmed, Final Report.
 AST may show penicillin-R, then the next best is one that gets into the spinal fluid quickly.

Specimen 4 - Wound - 15 year old Male, abdominal gunshot

Organisms	Extent 1	2	3	4	5
171 <i>Bacteroides</i> sp., not <i>B. fragilis</i> group					1
240 <i>Clostridium</i> sp., NOS				4	5
246 <i>Clostridium perfringens</i>				2	6
250 <i>Corynebacterium</i> sp., NOS				19	7
410 <i>Micrococcus</i> sp., NOS			3		
542 <i>Staphylococcus</i> sp., coagulase-negative, NOS	1			1	
543 <i>Staphylococcus</i> sp., coagulase-positive, NOS					
562 <i>Streptococcus</i> sp., beta-hemolytic Gp A (<i>S. pyogenes</i>)					1
690 Aerobe found, but referred for ID	11	3	7	2	
691 Anaerobe found, but referred for ID	19	11	51	43	
692 No anaerobes isolated					1
696 No aerobic growth on blood agar		1	13	1	
697 No pathogens isolated	1			1	
698 No aerobic growth	4	4	39	2	
699 No aerobic or anaerobic growth				1	
891 Organism is gram-negative	1				
892 Organism is gram-positive	17	3	11	5	
TOTAL PARTICIPANTS	53	23	151	74	16

Extent 1, 2 and 3 flagging appears for failure to report 240, 246, 690, 691, 696, 698, 892 or 992.
 Extent 4 and 5 flagging appears for failure to report 240, 246 or 691.
 In addition to the required organism, participants in all extents may report 250, 253, 892, 992 and any of the codes listed in Extent 1, 2 and 3.

This swab had *Clostridium perfringens* and *Corynebacterium* sp.
 Abdominal wounds usually perforate the intestines, which are filled with anaerobes, obligate or facultative. *C. perfringens* is the one most frequently found, because it is "aerotolerant" and survives on a swab that is not in an anaerobic preparation. Clostridia cause deadly diseases, like botulism, gas gangrene and tetanus
 Clostridia grow well on CDC blood agar in anaerobic jars, but a gram stain can ID *perfringens* very well. Short, plump, positive rods, which are nonmotile, and which ferment lactose in anaerobic tubes, with strong gas production, will ID *perfringens* which does not produce spores readily.
 Penicillin administered immediately after thorough debridement of the wound will prevent "post op." infections with clostridia. Use hydrogen peroxide in all wound cleansing; anaerobes are killed by it, but tissue is not.

Specimen 5 - Stool - 10 year old Male, severe diarrhea

Organisms	Extent 1	2	3	4	5
290 <i>Enterococcus</i> sp., NOS				1	
310 <i>Escherichia</i> sp., NOS		1	7		
312 <i>Escherichia coli</i>	1	1	78	29	7
490 <i>Pseudomonas</i> sp., NOS				1	
500 <i>Salmonella</i> sp., NOS				1	
530 <i>Shigella</i> sp., NOS	1	6	126	27	6
534 <i>Shigella flexneri</i> (Serotype B)			6	7	3
543 <i>Staphylococcus</i> sp., coagulase-positive, NOS				1	
560 <i>Streptococcus</i> sp., alpha-hemolytic, not Group D				1	
604 <i>Vibrio parahaemolyticus</i>			1		
680 Stool cult not performed, would refer	5			1	
686 Neg for <i>Sal</i> , <i>Shig</i> & <i>Campy</i> (ref for <i>Vib</i> & <i>Yers</i> culture)		1			
689 Neg for <i>Sal</i> & <i>Shig</i> (ref for <i>Vib</i> , <i>Yers</i> & <i>Campy</i> culture)			1	1	
690 Aerobe found, but referred for ID		4	4		
891 Organism is gram-negative	17		12		
TOTAL PARTICIPANTS	28	9	237	68	16

Extent 1, 2 and 3 flagging appears for failure to report 530, 534, 680, 690 or 891.
 Extent 4 and 5 flagging appears for failure to report 530 or 534.
 In addition to the required organism, participants in all extents may report 310, 312, 716 and any of the codes listed in Extent 1, 2 and 3.

This stool produced *Shigella flexneri* and *Escherichia coli*.
 Fast-foods and school-age consumers are made for food-borne infections. Under-cooked hamburger is the most common culprit for all food poisoning cases for children and adolescents. *Salmonella* and *Campylobacter* are the usual suspects, causing diarrheas and are usually self-limiting; use of antibiotics for other than septicemia is not warranted, because the destruction of the normal gut flora exacerbates the infection.
Shigella, however, causes dysentery by destroying the lumen of the intestines. Continuous bloody, watery stools characterize dysentery. The loss of blood is less dangerous than the loss of electrolytes, which actually may kill. This is a **Panic Value, Stat** organism.
 On XLD agar it produces a red colony, showing lactose and hydrogen sulfide negatives, and it is nonmotile, urea and oxidase negative. The four species are typed with antisera, Type B being *S. flexneri*.
 Ampicillin is given in treatment, traditionally, but Oriental strains from South American countries have brought some resistant strains here. Do AST Stool Panels to verify the choice of antibiotic for the systemic use which is required.