



Febrile Respiratory Illness (FRI) Surveillance Update

Operational Infectious Diseases
Naval Health Research Center, San Diego, CA



Week 16 (through 21 April 2012)

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Items of Note

- FRI rates at all basic training centers are at or below expected values
- Adenovirus vaccination of basic trainees has resumed after a 12 year absence

Influenza

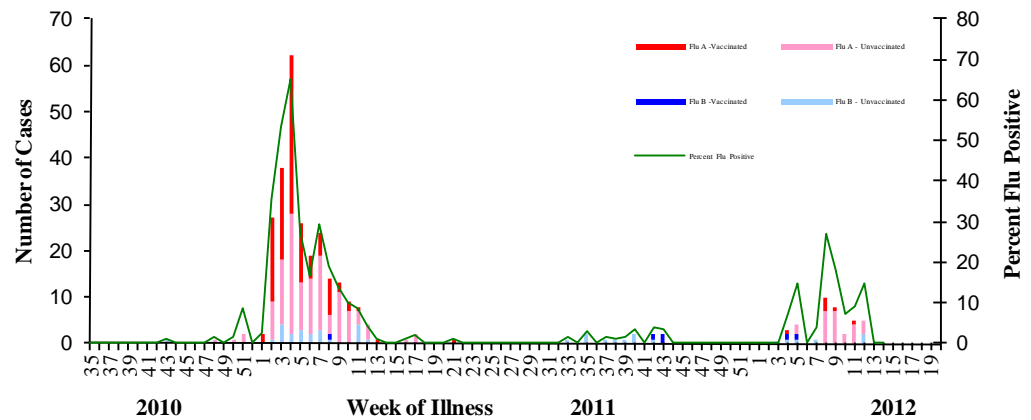
NHRC Laboratory-Confirmed Influenza Cases, US Military Basic Trainees

| Site | Current Week* | | | | 2011-12 | | | |
|--------------------|---------------|------|---------|---|---------|------|---------|----|
| | A/H1 | A/H3 | A/pH1N1 | B | A/H1 | A/H3 | A/pH1N1 | B |
| Ft. Benning | | | | | | 8 | 1 | 2 |
| Ft. Jackson | | | | | | 1 | | 6 |
| Ft. Leonard Wood | | | | | | 2 | 1 | |
| NRTC Great Lakes | | | | | | | 8 | 1 |
| Lackland AFB | | | | | | 3 | | |
| MCRD Parris Island | | | | | | | 1 | 8 |
| MCRD San Diego | | | | | | 1 | | 2 |
| CGTC Cape May | | | 5 | | | | 5 | |
| Total | 0 | 0 | 5 | 0 | 0 | 15 | 16 | 19 |

*Among 32 samples tested; Cape May cases occurred in mid-March and had been vaccinated 1-6 days prior

- NHRC also conducts shipboard FRI surveillance that includes large-deck ships of the 2nd (Atlantic), 3rd (Pacific), and 7th (Far East) Fleets.
- NHRC-CDC-BIDS collaborative border FRI surveillance program is ongoing at 5 US-Mexico border clinics in San Ysidro, Calexico, Brawley, El Centro, and Ft. Yuma.
- Influenza isolates and data from basic training, shipboard, and border surveillance are shared with the CDC.
- For more information about shipboard or border FRI surveillance, please [contact NHRC](#).

Vaccination Status of Confirmed Influenza Cases Among Military Basic Trainees, 2010-12

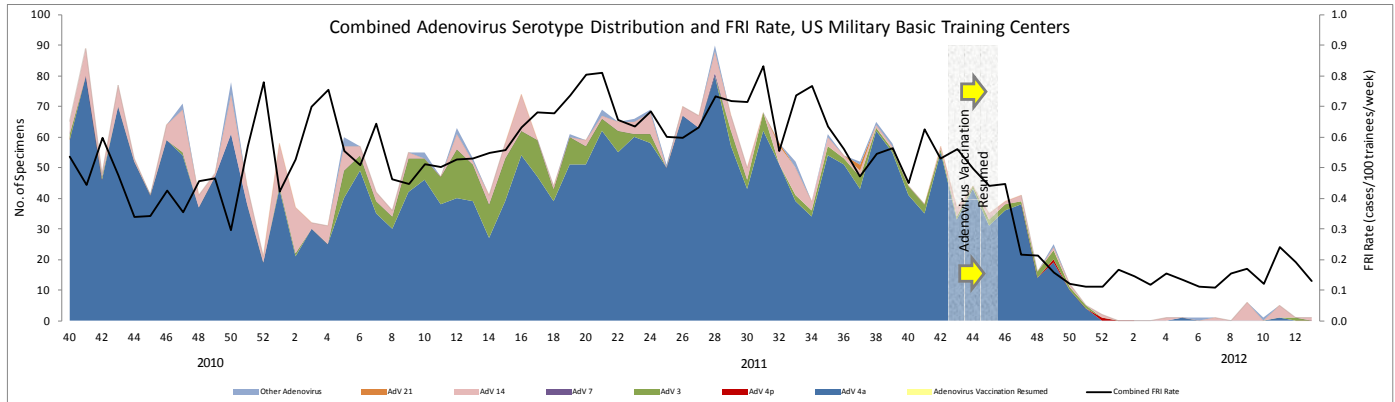


Other Items of Interest

- NHRC is conducting laboratory-based surveillance for meningococcal disease. The program's purpose is to track and characterize meningococcal cases among DoD medical beneficiaries. For more information and the most recent data, [click here](#).

Adenovirus

- Vaccination against types 4 and 7 adenovirus was instituted at all basic training centers by mid-November 2011 (week 45).
- FRI rates and the proportion of FRI cases positive for adenovirus have decreased markedly since vaccine was reintroduced.
- Type 14 adenovirus is present at MCRD Parris Island.
- A [MSMR paper on the initial impact of adenovirus vaccine resumption](#) was recently published.



FRI Rates

- FRI surveillance is ongoing at 8 U.S. military basic training centers, representing all service branches. As each week’s FRI count is reported, [FRI Rate Status](#) is classified into one of 3 categories:
 - At or below expected value (expected value shown as dashed line)
 - Moderately elevated
 - Substantially elevated

Week ending 21 April 2012:

- **At or below expected value:**

[Fort Benning](#)

[Fort Jackson](#)

[Fort Leonard Wood](#)

[Naval Recruit Training Command, Great Lakes](#)

[Marine Corps Recruit Depot, San Diego](#)

[Marine Corps Recruit Depot, Parris Island](#)

[Lackland Air Force Base](#)

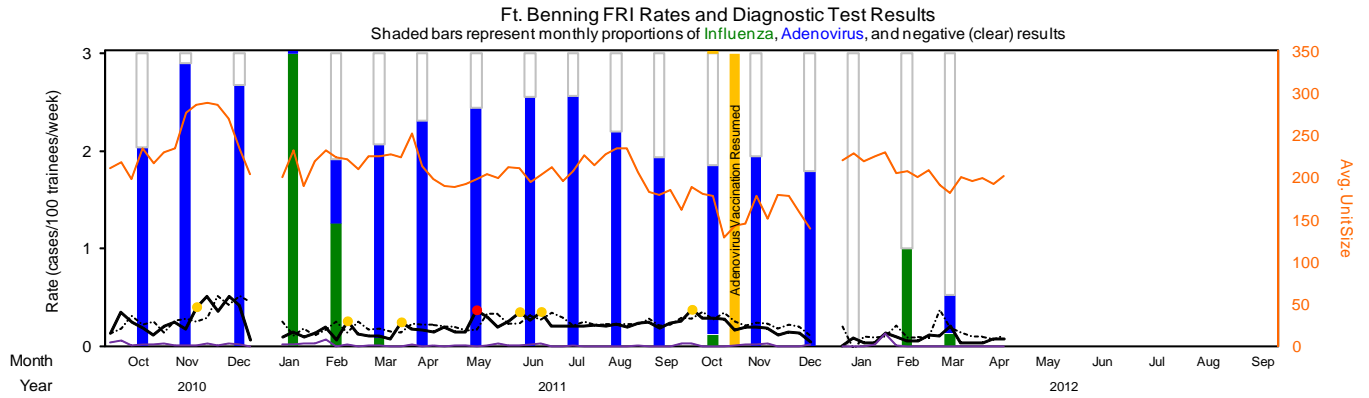
[Coast Guard Training Center, Cape May](#)

• **Moderately elevated:**

None

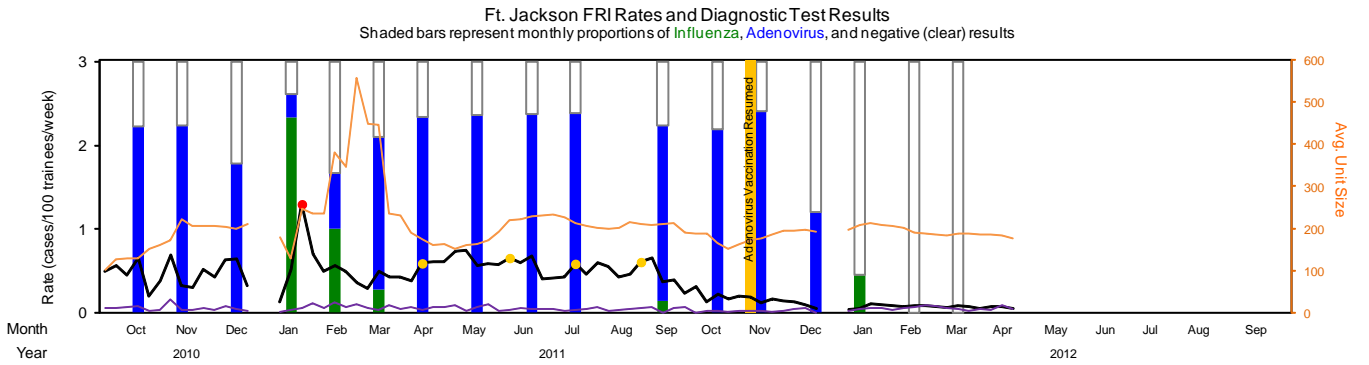
• **Substantially elevated:**

None



| Samples Received | 56 | 65 | 28 | 24 | 50 | 74 | 66 | 65 | 68 | 62 | 68 | 62 | 50 | 40 | 15 | 10 | 24 | 23 |
|---------------------|---------|------|-----|------|------|------|------|-----|-----|-----|-----|-----|------|------|------|----|-----|------|
| Adenovirus Positive | 68% | 97% | 89% | 4% | 22% | 66% | 77% | 82% | 85% | 85% | 74% | 65% | 58% | 65% | 60% | 0% | 0% | 13% |
| Flu Positive | 0% | 0% | 0% | 100% | 42% | 3% | 0% | 0% | 0% | 0% | 0% | 0% | 4% | 0% | 0% | 0% | 33% | 4% |
| AdV Subtype | 4 | 100% | 98% | 100% | | 4% | 10% | 57% | 91% | 89% | 94% | 98% | 100% | 100% | 100% | | | |
| | 7 | | | | | | | | | 2% | | | | | | | | |
| | 14 | | | | | 4% | 2% | | | | | | | | | | | |
| | 21 | | | | | | | | | | | | | | | | | |
| | 3 | | | | 100% | 100% | 88% | 90% | 38% | 5% | 8% | 6% | 3% | | | | | 33% |
| C | | 2% | | | | 4% | | 4% | 3% | 2% | | | | | | | | 67% |
| Flu Subtype | B | | | 8% | 10% | | | | | | | | 100% | | | | | |
| | H1 | | | | | | | | | | | | | | | | | |
| | H3 | | | | 17% | | | | | | | | | | | | 88% | 100% |
| | pH1N1 | | | | 75% | 90% | 100% | | | | | | | | | | 13% | |
| | Untyped | | | | | | | | | | | | | | | | | |

[Back to FRI Report](#)

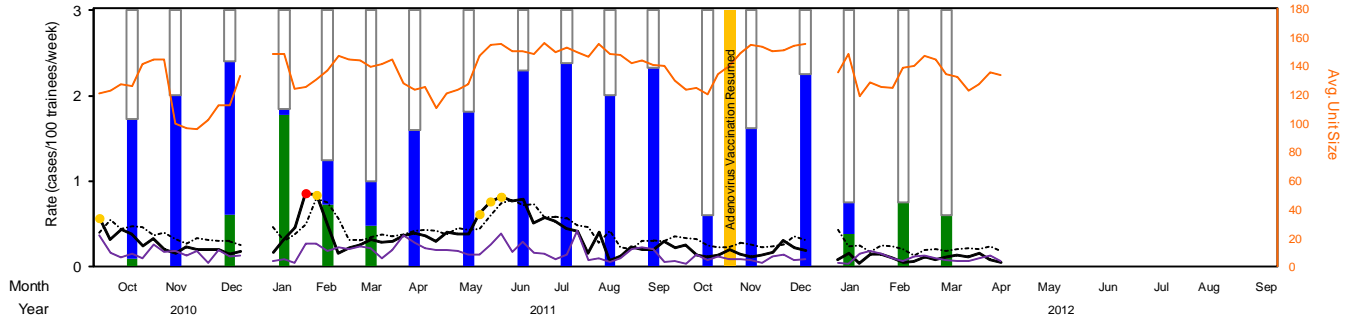


| Samples Received | 74 | 71 | 42 | 63 | 45 | 90 | 64 | 76 | 86 | 39 | 0 | 47 | 63 | 41 | 10 | 34 | 20 | 14 |
|---------------------|---------|------|------|------|------|------|-----|------|-----|-----|---|------|------|-----|-----|-----|----|----|
| Adenovirus Positive | 74% | 75% | 60% | 10% | 22% | 61% | 78% | 79% | 79% | 79% | | 70% | 73% | 80% | 40% | 0% | 0% | 0% |
| Flu Positive | 0% | 0% | 0% | 78% | 33% | 9% | 0% | 0% | 0% | 0% | | 4% | 0% | 0% | 0% | 15% | 0% | 0% |
| AdV Subtype | 4 | 100% | 100% | 100% | 100% | 98% | 98% | 100% | 99% | 97% | | 100% | 100% | 70% | 75% | | | |
| | 7 | | | | | | | | | | | | | | | | | |
| | 14 | | | | | | | | | | | | | | | | | |
| | 21 | | | | | | | | | | | | | | | | | |
| | 3 | | | | | | 2% | 2% | | | | | | | 27% | 25% | | |
| C | | | | | | | | | 1% | 3% | | | | 3% | | | | |
| Flu Subtype | B | | | 8% | | 13% | | | | | | 100% | | | | 80% | | |
| | H1 | | | | | | | | | | | | | | | | | |
| | H3 | | | | 6% | | | | | | | | | | | 20% | | |
| | pH1N1 | | | | 86% | 100% | 88% | | | | | | | | | | | |
| | Untyped | | | | | | | | | | | | | | | | | |

[Back to FRI Report](#)

- At or below expected value (expected = dashed line) • Moderately elevated • Substantially elevated — Pneumonia rate (incl. afebrile)

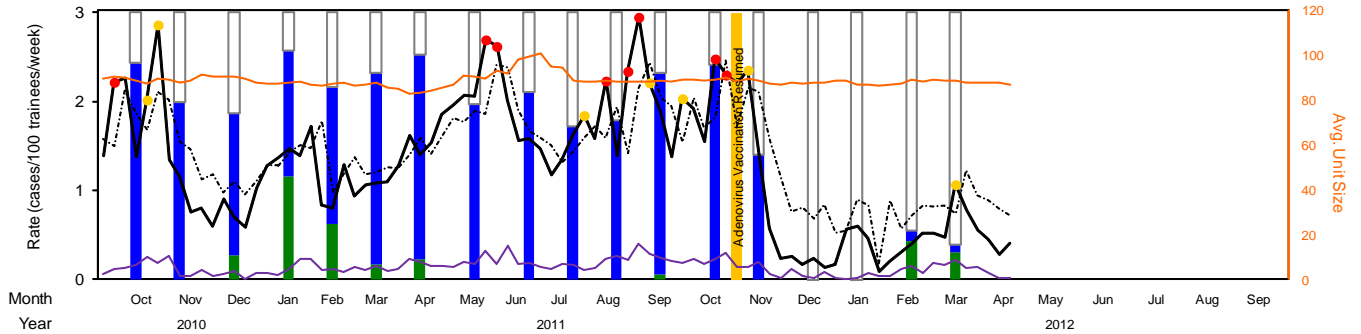
Ft. Leonard Wood FRI Rates and Diagnostic Test Results
 Shaded bars represent monthly proportions of Influenza, Adenovirus, and negative (clear) results



| Year | 2010 | 2011 | 2012 | | | | | | | | | | | | | | | |
|-------------------------|---------|------|------|------|------|-----|------|------|------|------|------|------|------|------|------|------|------|------|
| Samples Received | 33 | 24 | 5 | 39 | 29 | 51 | 45 | 43 | 51 | 39 | 27 | 31 | 10 | 13 | 8 | 8 | 4 | 5 |
| Adenovirus Positive | 55% | 67% | 60% | 3% | 17% | 18% | 53% | 60% | 76% | 79% | 67% | 77% | 20% | 54% | 75% | 13% | 0% | 0% |
| Flu Positive | 3% | 0% | 20% | 59% | 24% | 16% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 13% | 25% | 20% |
| AdV Subtype | 4 | 100% | 100% | 100% | 100% | 89% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | |
| | 7 | | | | | | | | | | | | | | | | | |
| | 14 | | | | | | | | | | | | | | | | | |
| | 21 | | | | | | | | | | | | | | | | | |
| | 3 | | | | | | | | | | | | | | | | | |
| C | | | | 100% | | | | | | | | | | | | | | 11% |
| Flu Subtype | B | 100% | | | | 14% | 25% | | | | | | | | | | | |
| | H1 | | | | | | | | | | | | | | | | | |
| | H3 | | | | | | | | | | | | | | | | | |
| | pH1N1 | | | 100% | 100% | 86% | 63% | | | | | | | | | 100% | 100% | |
| | Untyped | | | | | | | | | | | | | | | | | 100% |

[Back to FRI Report](#)

NRTC Great Lakes FRI Rates and Diagnostic Test Results
 Shaded bars represent monthly proportions of Influenza, Adenovirus, and negative (clear) results

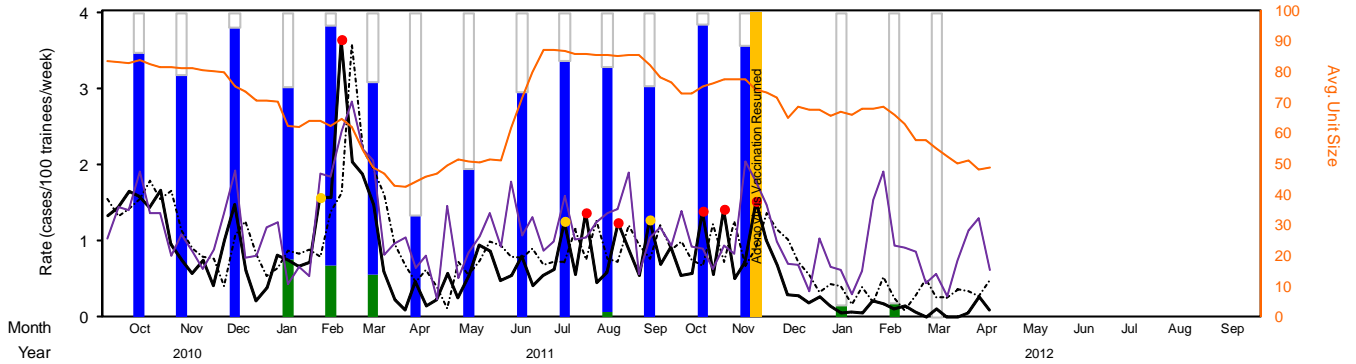


| Year | 2010 | 2011 | 2012 | | | | | | | | | | | | | | | |
|-------------------------|---------|------|------|------|------|------|------|------|-----|------|------|------|------|------|----|----|------|------|
| Samples Received | 58 | 15 | 32 | 49 | 43 | 49 | 38 | 35 | 47 | 47 | 62 | 44 | 36 | 17 | 5 | 24 | 27 | 38 |
| Adenovirus Positive | 81% | 67% | 53% | 47% | 51% | 71% | 76% | 66% | 70% | 57% | 60% | 75% | 81% | 47% | 0% | 0% | 4% | 3% |
| Flu Positive | 0% | 0% | 9% | 39% | 21% | 6% | 8% | 0% | 0% | 0% | 0% | 2% | 0% | 0% | 0% | 0% | 15% | 11% |
| AdV Subtype | 4 | 100% | 100% | 100% | 100% | 100% | 100% | 87% | 94% | 100% | 100% | 100% | 100% | 100% | | | | 100% |
| | 7 | | | | | | | | | | | | | | | | | |
| | 14 | | | | | | | | | | | | | | | | | |
| | 21 | | | | | | | | | | | | | | | | | |
| | 3 | | | | | | | | | | | | | | | | | |
| C | | | | | | | | 13% | 6% | | | | | | | | | 100% |
| Flu Subtype | B | | | 5% | 22% | | | | | | | 100% | | | | | | |
| | H1 | | | | | | | | | | | | | | | | | |
| | H3 | | | | 11% | 11% | | | | | | | | | | | | |
| | pH1N1 | | | 100% | 84% | 67% | 100% | 100% | | | | | | | | | 100% | 100% |
| | Untyped | | | | | | | | | | | | | | | | | |

[Back to FRI Report](#)

— At or below expected value (expected = dashed line) ● Moderately elevated ● Substantially elevated — Pneumonia rate (incl. afebrile)

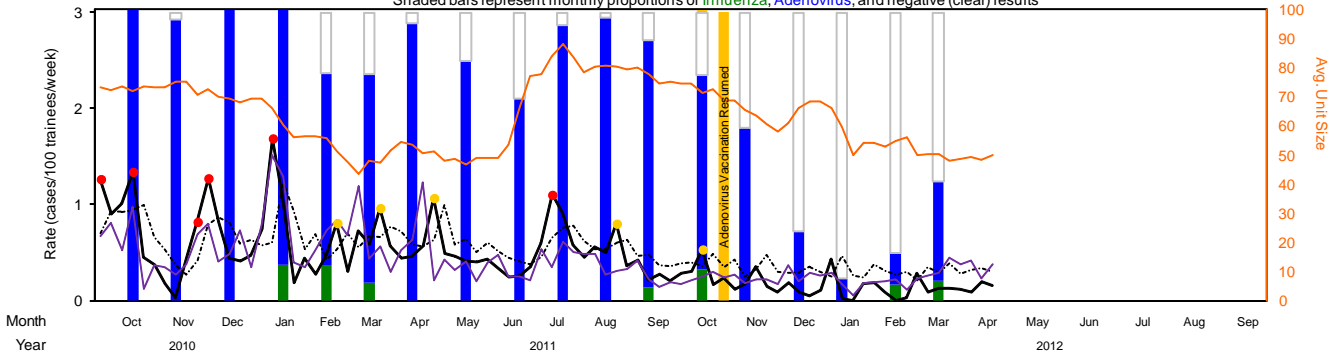
MCRD San Diego FRI Rates and Diagnostic Test Results
 Shaded bars represent monthly proportions of Influenza, Adenovirus, and negative (clear) results



| | | | | | | | | | | | | | | | | | | |
|-------------------------|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|----|------|----|
| Samples Received | 69 | 49 | 41 | 53 | 71 | 44 | 36 | 37 | 46 | 64 | 68 | 62 | 53 | 56 | 0 | 29 | 24 | 15 |
| Adenovirus Positive | 87% | 80% | 95% | 57% | 79% | 64% | 33% | 49% | 74% | 84% | 81% | 76% | 96% | 89% | 0% | 0% | 0% | 0% |
| Flu Positive | 0% | 0% | 0% | 19% | 17% | 14% | 0% | 0% | 0% | 0% | 1% | 0% | 0% | 0% | 0% | 3% | 4% | 0% |
| AdV Subtype | 4 | 98% | 97% | 97% | 80% | 79% | 89% | 92% | 72% | 65% | 72% | 75% | 79% | 88% | 98% | | | |
| | 7 | | | | | | | | | | | | | | | | | |
| | 14 | | | | 17% | 7% | | | 6% | 24% | 20% | 13% | | | | | | |
| | 21 | | | | | | | | | | | | | | | | | |
| | 3 | 2% | 3% | 3% | 3% | 13% | 11% | 8% | 17% | 12% | 7% | 13% | 21% | 12% | | | | |
| C | | | | | 2% | | | 6% | | | | | | 2% | | | | |
| Flu Subtype | B | | | | 8% | 33% | | | | | 100% | | | | | | 100% | |
| | H1 | | | | | | | | | | | | | | | | | |
| | H3 | | | | 90% | 8% | | | | | | | | | | | 100% | |
| | pH1N1 | | | | 10% | 83% | 67% | | | | | | | | | | | |
| | Untyped | | | | | | | | | | | | | | | | | |

[Back to FRI Report](#)

MCRD Parris Island FRI Rates and Diagnostic Test Results
 Shaded bars represent monthly proportions of Influenza, Adenovirus, and negative (clear) results

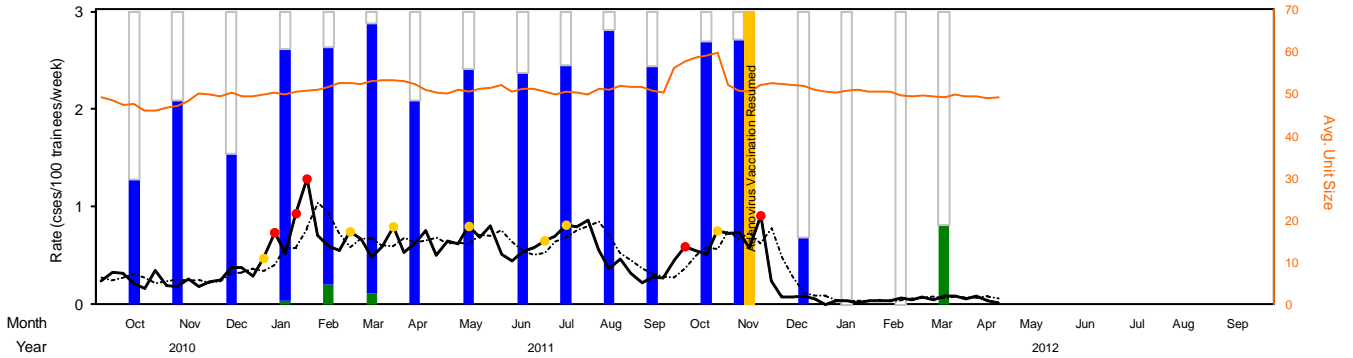


| | | | | | | | | | | | | | | | | | | |
|-------------------------|---------|-----|------|-----|-----|-----|------|-----|-----|-----|-----|------|------|-----|-----|-----|------|------|
| Samples Received | 45 | 39 | 38 | 63 | 57 | 47 | 53 | 36 | 40 | 66 | 58 | 42 | 37 | 25 | 25 | 13 | 18 | 29 |
| Adenovirus Positive | 100% | 97% | 100% | 98% | 67% | 72% | 96% | 83% | 70% | 95% | 98% | 86% | 68% | 60% | 24% | 8% | 11% | 34% |
| Flu Positive | 0% | 0% | 0% | 13% | 12% | 6% | 0% | 0% | 0% | 0% | 0% | 5% | 11% | 0% | 0% | 0% | 6% | 7% |
| AdV Subtype | 4 | 64% | 39% | 33% | 42% | 79% | 82% | 55% | 93% | 71% | 83% | 72% | 81% | 84% | 67% | 17% | | |
| | 7 | | | | | | | | | | | | | | | | | |
| | 14 | 36% | 61% | 65% | 58% | 21% | 15% | 41% | 7% | 29% | 16% | 23% | 14% | 16% | 33% | 50% | 100% | 100% |
| | 21 | | | | | | | | | | | | 2% | 6% | | | | |
| | 3 | | | | | 3% | 4% | | | | 2% | 4% | | | | 33% | | |
| C | | | 3% | | | | | | | | | | | | | | | |
| Flu Subtype | B | | | | 13% | | | | | | | 100% | 100% | | | | 100% | |
| | H1 | | | | | | | | | | | | | | | | | |
| | H3 | | | | 25% | 57% | | | | | | | | | | | | |
| | pH1N1 | | | | 63% | 43% | 100% | | | | | | | | | | 100% | |
| | Untyped | | | | | | | | | | | | | | | | | |

[Back to FRI Report](#)

— At or below expected value (expected = dashed line) ● Moderately elevated ● Substantially elevated — Pneumonia rate (incl. afebrile)

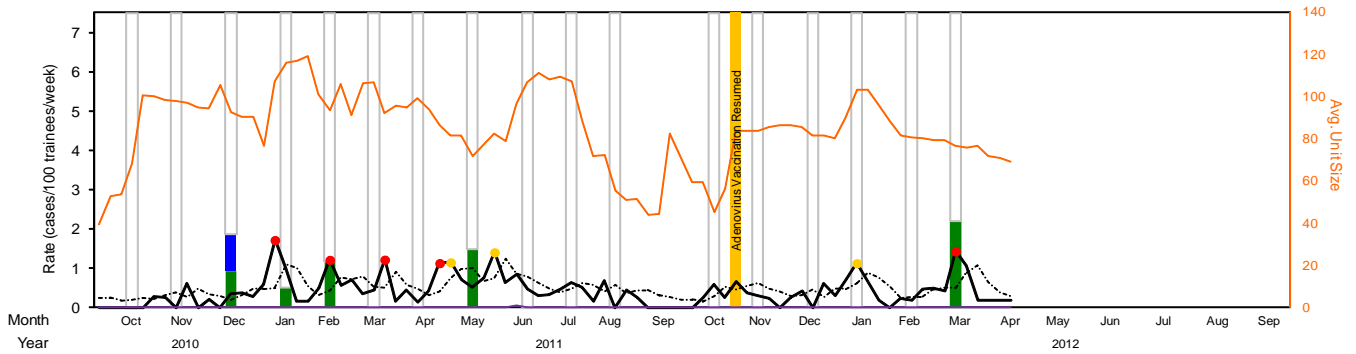
Lackland AFB FRI Rates and Diagnostic Test Results
 Shaded bars represent monthly proportions of Influenza, Adenovirus, and negative (clear) results



| Month | Year | Samples Received | Adenovirus Positive | Flu Positive | AdV Subtype | Flu Subtype |
|-------|------|------------------|---------------------|--------------|-------------|-------------|
| Oct | 2010 | 21 | 43% | 0% | 4 | |
| Nov | 2010 | 23 | 70% | 0% | 7 | |
| Dec | 2010 | 35 | 51% | 0% | 14 | |
| Jan | 2011 | 62 | 85% | 2% | 21 | 100% |
| Feb | 2011 | 58 | 81% | 7% | 3 | 50% |
| Mar | 2011 | 48 | 92% | 4% | 3 | 50% |
| Apr | 2011 | 43 | 70% | 0% | C | 100% |
| May | 2011 | 46 | 80% | 0% | | |
| Jun | 2011 | 53 | 79% | 0% | | |
| Jul | 2011 | 60 | 82% | 0% | | |
| Aug | 2011 | 31 | 94% | 0% | | |
| Sep | 2011 | 43 | 81% | 0% | | |
| Oct | 2011 | 58 | 90% | 0% | | |
| Nov | 2011 | 52 | 90% | 0% | | |
| Dec | 2011 | 13 | 23% | 0% | | |
| Jan | 2012 | 6 | 0% | 0% | | |
| Feb | 2012 | 1 | 0% | 0% | | |
| Mar | 2012 | 11 | 0% | 27% | | 100% |
| Apr | 2012 | | | | | |

[Back to FRI Report](#)

CGTC Cape May FRI Rates and Diagnostic Test Results
 Shaded bars represent monthly proportions of Influenza, Adenovirus, and negative (clear) results



| Month | Year | Samples Received | Adenovirus Positive | Flu Positive | AdV Subtype | Flu Subtype |
|-------|------|------------------|---------------------|--------------|-------------|-------------|
| Oct | 2010 | 1 | 0% | 0% | 4 | |
| Nov | 2010 | 4 | 0% | 0% | 7 | |
| Dec | 2010 | 8 | 13% | 13% | 14 | 100% |
| Jan | 2011 | 14 | 0% | 7% | 19 | 100% |
| Feb | 2011 | 19 | 0% | 16% | 11 | 33% |
| Mar | 2011 | 11 | 0% | 0% | 16 | |
| Apr | 2011 | 16 | 0% | 0% | 5 | |
| May | 2011 | 5 | 0% | 20% | 12 | 100% |
| Jun | 2011 | 12 | 0% | 0% | 11 | |
| Jul | 2011 | 11 | 0% | 0% | 7 | |
| Aug | 2011 | 7 | 0% | 0% | 0 | |
| Sep | 2011 | 0 | 0% | 0% | 6 | |
| Oct | 2011 | 6 | 0% | 0% | 4 | |
| Nov | 2011 | 4 | 0% | 0% | 2 | |
| Dec | 2011 | 2 | 0% | 0% | 7 | |
| Jan | 2012 | 7 | 0% | 0% | 5 | |
| Feb | 2012 | 5 | 0% | 0% | 17 | 100% |
| Mar | 2012 | 17 | 0% | 0% | | |
| Apr | 2012 | | | | | |

[Back to FRI Report](#)

— At or below expected value (expected = dashed line) ● Moderately elevated ● Substantially elevated — Pneumonia rate (incl. afebrile)