

**Vital Healthcare Information Brought to You by Correctional Healthcare Companies**

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## HINI OUTBREAK PREVENTION

HINI influenza (swine flu) outbreaks in a correctional facility can be controlled and minimized by utilizing some common sense techniques and early isolation of those suspected sentinel cases. Upon an inmate being brought in for intake, a mandated hand washing requirement can be implemented including washing under fingernails for 20-30 seconds- so as to decrease carriage rates at the institution. Viral transmission is most often through respiratory droplets, via cough and expectoration and then transfer via hand/nose or eye contact. Explaining expectations to the incarcerated population of appropriate cough technique (covering mouth with sleeve or hand, and then washing as soon as possible) will help decrease the spread of the virus and help control outbreaks. Explaining that the virus can live on surfaces for up to 4-8 hours and the lethality of the swine flu to younger populations may help with individuals taking responsibility for their environment and minimizing the spread of the virus. During any outbreak, having inmates presume that all others are infected-thereby avoiding contact whether or not they are expressing symptoms-may decrease the spread of the disease. Three simple protective actions recommended for all include:



Thoroughly washing your hands helps decrease the spread of diseases such as the HINI influenza.



*Wash hands correctly and completely (approximately 30 seconds-about as long as singing the Happy Birthday song through completely twice).*



*Cover your mouth when sneezing or coughing-and then wash hands as soon thereafter as possible.*



*Decrease touching of one’s face/mouth /eyes etc. and if it is touched, wash hands again as soon as possible.*

## HINI “TEXT” INFORMATION

In the face of the possible pandemic related to swine flu (HINI influenza), the Centers for Disease control are piloting a new program to deliver health information related to swine flu via text messaging. There is no charge for the service (aside from standard texting charges) and the CDC has made it easy to sign up. All one has to do is go to [m.cdc.gov](http://m.cdc.gov) on your mobile phone’s browser, and text the word “HEALTH”

to 87000. After four introductory messages, you will receive approximately three messages per week pertaining to HINI influenza. If you want to stop the texts, one only needs to text “HEALTH QUIT” to 87000. It is a three month pilot project. Additional information can be found on the web sites, [www.flu.gov](http://www.flu.gov), [www.cdc.gov](http://www.cdc.gov), and [www.cdc.gov/HINIFLU/](http://www.cdc.gov/HINIFLU/).

## TESTING FOR H1N1 INFLUENZA

Clinicians who suspect H1N1 influenza are encouraged to treat based on clinical suspicion in the vast majority of anticipated cases and to reserve actual diagnostic testing for the acutely ill who are hospitalized as well as those suspected individuals with severe co morbid illnesses. The actual duration of shedding of the virus in H1N1 is unknown, and therefore is based on experience with seasonal influenza virus infection. This is suspected to be from the day prior to development of symptoms until resolution of fever. Infected persons are suspected to be contagious up to seven days from the onset of the illness, and are thus asked to stay home from work for at least 24 hours after resolution of symptoms (the CDC expands this timeframe for healthcare workers that come into contact with immune-compromised patients).

Given the cost of testing for swine flu (\$300-\$400), it is recommended that this be reserved for those who are hospitalized. Some of the commercially available influenza

swab test kits may be able to distinguish between influenza A and B, however, given that the sensitivity and specificity of these tests for H1N1 is unknown, a negative rapid test is not to be assumed to exclude the possibility of H1N1, and thus could be considered a false negative. The only truly confirmatory tests for H1N1 are the polymerase chain reaction tests (PCR), and an actual viral culture itself. The viral culture, however, may not yield timely results for patient care. In conclusion, a rapid test does not rule in or out the possibility of H1N1 infection, and given that the patient should be treated supportively anyway, the CDC sees very little reason to test in an outpatient setting. If a patient clinically deteriorates (tachypnea, hypotensive, septic, etc.), then they should be sent out for additional medical evaluation in an inpatient setting. Appropriate isolation precautions should be utilized in those cases that are monitored on site.

## THE DASH DIET AND CARDIOVASCULAR DISEASE

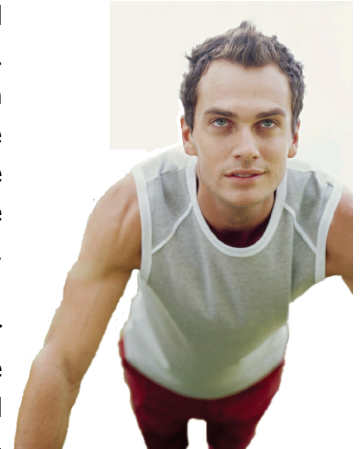
Recent data presented at the American College of Cardiology meetings in April, 2009 (Orlando, Florida), demonstrated that adding aerobic activity and a weight loss program to the Dietary Approaches to Stop Hypertension (DASH) diet improved efficacy. The lead author of the study, Dr. James Blumenthal of the University of North Carolina, also noted that

*Adding aerobic activity and a weight loss program to the Dietary Approaches to Stop Hypertension diet improved efficacy.*

this exercise program (30 minutes of aerobic activity at least three times per week) coupled with caloric restriction dramatically improved fasting blood glucose levels, decreased resting heart rates and remodeled left ventricular hypertrophy, more than what had been anticipated based on previous research. In combination with the DASH diet, it saw an average of 19 lbs weight loss over sixteen weeks. The DASH diet, first detailed in 1997, showed that a diet high in fruits, vegetables, grains and low fat dairy products will substantially lower one's systolic blood pressure, by up to 12 points, and diastolic BP by 6 points.

Researchers have long argued for wider acceptance and implementation of this approach nationally. Recent studies suggest that only 20-22% of all hypertensive patients engage in the DASH diet (National Health and Nutrition Examination Survey-NHANES-2004) despite these arguments, and the explanations for this failure are many. Older adults are more likely to be compliant with this diet, as are non-Hispanic whites vs. African Americans (NHANES). Women are more compliant than men, although duration of compliance is equivocal.

There are a multitude of possible explanations for this, including lack of medical provider familiarity with the guidelines, patient's lack of enthusiasm for compliance with an exercise and dietary regimen, as well as the powerful food industry and their marketing of processed foods. Engaging patients in a discussion about their health and encouraging them to use non-pharmacological means to achieve optimal health-or to compliment pharmaceutical interventions-should be a cornerstone of medical therapy.



## MENTAL STATUS EXAMINATION

A working knowledge of what constitutes a mental status examination is necessary for all providers as well as nursing staff, in order to most concisely describe neurological changes, as well as to more precisely diagnose an individual's problem. When documenting in the medical record, the more precise one can be, the more accurate paper trail that is created from a medico legal standpoint. There are four major components: 1) Level of consciousness, 2) Orientation, 3) Memory and 4) Language.

**Level of consciousness can be broken down into four succinct levels.**

1. **Alertness** - an awake, alert individual with perceived normal level of consciousness.
2. **Lethargy** - a sleepy patient that needs to be aroused or stimulated in order to converse with them.
3. **Stupor** - a patient that cannot be aroused, but may be associated with moaning, or moving around during exam.
4. **Coma** - no purposeful movement or response to stimulation.

Orientation refers to the recognition of person, place and time. It is assessed by asking the patient their name, location, day and date of the month and year. Memory is assessed by asking an individual to recall three non related words immediately and in five minutes. (One example is pony, quarter and orange). Language is assessed by evaluating both comprehension and clarity of speech. This may be briefly alluded to while evaluating any of the other components as illustrated above.

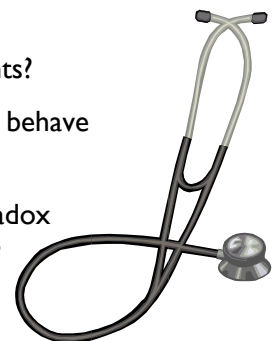
Documenting these qualities in an objective manner in the chart may help identify a problem before it is full blown (i.e., sepsis or hepatic encephalopathy), as well as assist in demonstrating competency in an individual case prior to some catastrophic episode. Using the above mentioned and widely accepted nomenclature helps uniformly evaluate patients and better deliver an acceptable standard of medical care.

### MEDICAL TIDBITS

- |   |    |                |                |    |  |           |     |  |             |    |  |       |    |  |          |       |  |             |  |
|---|----|----------------|----------------|----|--|-----------|-----|--|-------------|----|--|-------|----|--|----------|-------|--|-------------|--|
| <p>1. Match the neurological dermatome with the associated anatomical level:</p> <table border="0" style="width: 100%;"> <tr> <td style="width: 20%;">C6</td> <td style="width: 10%; border-left: 1px solid black; border-right: 1px solid black;"></td> <td style="width: 70%;">bottom of foot</td> </tr> <tr> <td>T4</td> <td style="border-left: 1px solid black; border-right: 1px solid black;"></td> <td>umbilicus</td> </tr> <tr> <td>T10</td> <td style="border-left: 1px solid black; border-right: 1px solid black;"></td> <td>top of foot</td> </tr> <tr> <td>L5</td> <td style="border-left: 1px solid black; border-right: 1px solid black;"></td> <td>thumb</td> </tr> <tr> <td>S1</td> <td style="border-left: 1px solid black; border-right: 1px solid black;"></td> <td>perineum</td> </tr> <tr> <td>S2-S4</td> <td style="border-left: 1px solid black; border-right: 1px solid black;"></td> <td>nipple line</td> </tr> </table> | C6 |                | bottom of foot | T4 |  | umbilicus | T10 |  | top of foot | L5 |  | thumb | S1 |  | perineum | S2-S4 |  | nipple line | <p>3. What is dystonia?</p> <p>4. What are chorea-like movements?</p> <p>5. How should the abdominal wall behave during normal respirations?</p> <p>6. How sensitive is abdominal paradox in predicting respiratory failure?</p> |
| C6  |    | bottom of foot |                |    |  |           |     |  |             |    |  |       |    |  |          |       |  |             |  |
| T4  |    | umbilicus      |                |    |  |           |     |  |             |    |  |       |    |  |          |       |  |             |  |
| T10   |    | top of foot    |                |    |  |           |     |  |             |    |  |       |    |  |          |       |  |             |  |
| L5  |    | thumb          |                |    |  |           |     |  |             |    |  |       |    |  |          |       |  |             |  |
| S1  |    | perineum       |                |    |  |           |     |  |             |    |  |       |    |  |          |       |  |             |  |
| S2-S4   |    | nipple line    |                |    |  |           |     |  |             |    |  |       |    |  |          |       |  |             |  |

2. What is myoclonus?

(Answers located on next page)



### **MEDICAL HUMOR**

Three old men go to see the doctor about memory loss and are asked to take a memory test. The doctor asks the first one, "What is three times three?" "274" says the first man. The doctor worriedly asks the second gentleman, "Ok it's your turn. What is three times three?" "Tuesday" replies the second man. The doctor sadly turns to the third man and asks, "What is three times three?" "Nine," says the old man. "That's great!" says the Doctor. "How did you get that?" "That was easy, Doc. I just subtracted 274 from Tuesday."

## DOCUMENTATION DO'S AND DON'TS

### Use of Personal Commentary

When charting a patient encounter, always be objective and do not inject personal commentary into the SOAPE note. Also, document fully, but to the point, utilizing approved abbreviations, and documenting a timeline of events if appropriate. It may help to draw the area involved so as to be more precise anatomically. Document any allergies each and every encounter, even if documented before (this helps verify that the question was asked and that the list is being continually updated). Always tell the inmate to return to medical if the problem isn't resolved. Also, one should document duration of symptoms or problem length as well as any change (worsening or improvement) in symptoms over time, as this may be important in determining causation. Attempt to work with the patient in regards to a plan so as to have their full and complete cooperation. By having the patient "buy in" to their own treatment program, they are more likely to improve and less likely to be litigious.



### Medical Record Integrity: Avoiding A "Sticky" Situation

It has recently come to the attention of the Utilization Department that some sites are making use of "sticky notes" to convey information - and sometimes medical orders, to other healthcare team members. For example, insulin sliding scales that have been written down on a "sticky note" and then placed in the medical record in the medication section. Although these sticky notes may be used for communication purposes, they should never be relied upon as part of the permanent record given their propensity to come apart from the sheet they were placed on. All medical information that is to be part of the permanent record must be placed legibly in the permanent record, and not on "sticky notes."



## DEA REGULATIONS AND CORRECTIONAL FACILITIES

There are numerous factors that affect insulin absorption, and all of these can cause labile glucose levels, affecting the desired level of control. These include obvious factors such as the dose and type utilized, as well as location of injection. If insulin is administered in the abdomen, above and to the side of the umbilicus, it is more consistently absorbed. If it is injected into muscle tissue instead of subcutaneously or accidentally into a blood vessel, it will be absorbed more rapidly.

Additional factors include if one applies heat to the area after injection. This may be in the form of a hot shower, using a heat pack or massaging the area. All of these will serve to increase absorption. Similarly, if one has exercised or specifically exercised those muscles around the site of injection, there will be more rapid absorption. If one is dehydrated, and there is decreased blood flow to the area of injection, there will actually be decreased absorption. All of these factors must be considered possibilities in the face of a previously controlled and now labile diabetic.

### Medical Tidbits Answers

- |                  |                     |
|------------------|---------------------|
| C6 - thumb       | L5 - top of foot    |
| T4 - nipple line | S1 - bottom of foot |
| T10 - umbilicus  | S2-S4 - perineum    |
- A sudden, shock like, jerking or twitching motion of a joint.
- A persistent, fixed, contraction of a muscle, such as torticollis, or spastic neck. These are abnormal and involuntary movements of certain muscle groups.
- These are an involuntary writhing and twisting motion.
- The abdominal wall motion should be synchronized with the chest wall, ideally expanding in inspiration and contracting during exhalation. When the abdominal wall expands while the chest is being pulled inward, this is known as abdominal paradox or paradoxical respiration. This typically indicates a weakening or paralysis of the diaphragm. It can be seen postoperatively when there has been phrenic nerve damage or dysfunction, or when there has been progressive weakening of the diaphragm with impending respiratory fatigue.
- In a patient that develops new onset paradoxical respirations, the sensitivity is very high. It correlates with deterioration in arterial blood gas results with impending respiratory failure..