function and also take any actions that are appropriate regarding the allegation of abusive actions by correctional staff on 12/05/10.

12. I reviewed the medical record of a 28 year old woman (MCJ # 719570) who died in the Estrella Jail on 12/07/10, after she collapsed in a shower and was non-responsive despite cardiopulmonary resuscitation efforts. She had been screened on 12/01/10, reported having asthma and being on multiple medications. She was noted to have marked obesity. A "Pre-Booking Assessment Medical Clearance Report" dated 12/01/10 showed normal blood pressure, pulse rate, respiratory rate and blood oxygen levels. On 12/02/10, she submitted a request to be seen for severe persistent headaches. She was then seen by a nurse on 12/04/10 at which time systolic blood pressure was moderately elevated at 151 mm Hg. The nurses' assessment note indicates that the patient described her headache both as "sudden onset" and the "same as usual". The nurse recommended aspirin and because the patient said she had not been drinking the water in the jail, gave water and encouraged her to drink water as usual. On 12/06/10, the patient submitted another request to be seen for headache. A nurse sent a written response recommending administration of Tylenol for the headache. The patient's sudden death occurred later that day. The report of an autopsy was not complete as of March 1, 2001,

but the cause of death according to the death certificate was subarachnoid hemorrhage due to rupture of one of the arteries supplying the brain. This type of cerebrovascular catastrophe is rare in a young person and was likely unrelated to this patient's other medical problems of obesity and asthma. The patient's headache symptoms may have been associated with an arterial aneurysm (out-pouching); however, this is speculative, lacking full results of the autopsy. The systolic blood pressure elevation was not severe and not likely to have caused a cerebral arterial aneurysm or rupture. The patient apparently did not complain of neck pain or stiffness which is often present with the onset of a subarachnoid hemorrhage. Other observations regarding quality of care are not appropriate without additional information, including the final autopsy report. It is appropriate, however, for CHS to review its nursing protocol with respect to evaluation of patients with sudden onset of severe headache. I will discuss this recommendation with Dr. Alvarez and offer such advice as may be helpful.

Among the other medical records that were reviewed and critiqued in January 2011 by Plaintiffs' Counsel, there are numerous other examples of deficiencies in quality and documentation of care. I agree with Plaintiff's Counsel that

many of these deficiencies can logically be placed into the following categories:

- Delays in care and stabilization of incoming (Intake Center) patients,
- Incomplete or incorrect nursing assessments and lack of actual or timely communications from nurses to medical practitioners.
- Medication errors of commission, omission and and MAR documentation.

It is important to note that the records summarized above were drawn from a very selective sampling methodology requested by Plaintiffs' Counsel. This sampling methodology effectively identifies adverse events associated with care of complex patients, most of whom have multiple chronic serious medical conditions. For example, the sample includes all patients who were transferred from CHS facilities to an outside hospital or emergency department during a prior four month period. Furthermore, from among a total of approximately 110 medical records made available for their review, Plaintiffs' Counsel forwarded to me a list of thirty-five written summaries. I do not know if Plaintiffs' Counsel reviewed other records and if so, whether negative or positive observations were made. Because of the sampling methodology used to identify these cases, it is not possible to extrapolate the results

of to a random sample of the larger CHS patient population or even to the entire CHS population with chronic illnesses. This ambiguity is a major question that I will address in subsequent record reviews conducted in concert with CHS as described in the Corrective Action Plan detailed in Part E of this Sixth Report.

Despite the highly selective sampling methodology used in selecting the records reviewed recently by Plaintiffs' Counsel and me, these records do reflect a higher than acceptable prevalence of quality of care deficiencies in the context of the SAJ.

Part E – Corrective Action Plan

Judge Wake's Order of January 3, 2009 includes a provision for the Court's appointed medical and mental health experts to assist CHS in preparation of a Corrective Action Plan, if needed, to achieve compliance with pertinent requirement of the SAJ. Because compliance with Paragraphs 6, 7, and 8 of the SAJ has not been achieved, and CHS has agreed that further actions are consistent with their needs and objectives, I have worked closely with CHS' executive leaders to prepare the Corrective Action Plan that is detailed in the following section of this report. The substance of this plan largely mirrors the content of the ten remedies that were proposed in

my **Expert's Report on Compliance with Medical Provisions of Second Amended Judgment**, dated August 20 2010. Based on current circumstances, including a new CHS leadership team, I have made a number of modifications and additions in the content and format of my previously proposed remedies. For the most part, I think these changes are in line with the understanding and agreement of CHS leadership. As is usually the case with any major health care organization committed to a Continuous Quality Improvement (CQI) Program, further adaptations within this Corrective Action Plan may well be necessary and appropriate going forward over the next 12 to 18 months.

To the extent that Counsel for Plaintiffs and Defendants may disagree with any aspect of this CAP, I ask that they consider the following points:

- I will be intensively monitoring implementation of all aspects of this plan with the expectation that positive outcomes will be evident in terms of accessibility, coordination and continuity of health care and a reduction in potentially preventable adverse events
- If specific aspects of the CAP prove ineffective or insufficient to achieve needed improvements in health care quality, I will propose and support whatever changes are necessary.

- I will continue to offer to facilitate regular joint meetings with CHS leaders and Plaintiffs' and Defendants' Counsel to discuss implementation of the CAP, joint review and discussion of medical records, policies and procedures and measures that may be useful in assessing compliance.

The Corrective Action Plan I propose at this time has the following components and projected timelines. Many components will also be monitored and assessed with respect to their implementation and outcomes as part of CHS' Continuous Quality Improvement Plan.

CAP – 1: **Physician and Provider (PA and NP) Staffing at the 4th Avenue Intake Center**

At the 4th Avenue Jail Intake Center, CHS will expand its professional coverage to include 24 hour per day presence of at least one licensed physician, physician assistant (PA) or nurse practitioner (NP) qualified by training, experience, licensure or certification to identify, assess, treat and, when necessary, refer out, all newly received pretrial detainees who have or are at risk for serious acute or chronic illnesses, physical handicaps, debilitation or other vulnerabilities associated with their physical or mental condition. All new physicians employed to provide expanded coverage will be

Board- certified in Internal Medicine, Family Medicine or Emergency Medicine. Physician Assistants or Nurse Practitioners participating in coverage will be skilled in the basic procedures and emergency care needed to cover the Intake Department. They will at all times have either on-site or telephonic back-up by a physician. During the 168 hours comprising each week, 80 hours will be covered by physician assistants and 88 hours by physicians. Expanded weekday night shift coverage will be in place no later than June 1, 2011. Weekend and holiday coverage will start no later than August 1, 2011. CHS will document staffing by shift on a monthly basis and report actions taken to secure expanded physician coverage

CAP – 2: **Timely Assessment and Treatment Plans at Intake for Patients with Significant Medical Problems**

Simultaneous with expansion of physician and PA/NP coverage of the Intake Center, CHS will steadily increase its capacity to complete medical evaluations and institute treatment plans promptly after initial Reception Screening, including prescribing of essential medications, for all patients with significant acute or chronic medical conditions. The objective is for all such patients to have a "hands-on" examination and completion of an initial assessment and plan to include the ordering of medications, pertinent labs and a

scheduled follow-up specific to their needs. The foregoing tasks will be completed no later than 24 hours after initial jail entry, and in most instances much sooner. The expanded Intake Center physician and PA/NP coverage will enable CHS to fulfill requirements of the RECEIVING SCREENING Standard J-E-02 of the 2008 Standards for Health Services in Jails of the National Commission on Correctional Health Care (NCCHC). Furthermore, CHS will be better prepared to provide, no later than the first 24 hours after Receiving Screening, an initial health assessment for all persons identified with *clinically significant findings* in compliance within NCCHC Standard J-E-04 on INITIAL HEALTH ASSESSMENT. The foregoing services will be implemented between April 1 and August 1, 2011. As practitioner staffing increases in the 4th Avenue Intake Center, CHS will steadily achieve increases in the proportion of patients with clinically significant findings who have their initial health assessment completed within 24 hours after Receiving Screening.

CAP – 3: **Timely Referrals and Transport of Intake Center Patients Needing Infirmary Care**

In my August 20, 2010 Expert's Report on Compliance, I proposed that the 4th Avenue Jail Intake Center adapt its facilities and add equipment and staff suitable for patients who need an Infirmary level of care, but who cannot be

transferred to the LBJ because of pre-arraignment status or other reasons. I am modifying my original recommendation in this regard for the following reasons:

- On behalf of the MCSO, Defendants have responded that pre-arraignment or classification status does not pose significant obstacles to transferring patients timely to the LBJ Infirmary.
- The MCSO has agreed to expand the proximate space available to the Intake Center. This expansion of space will be beneficial in helping CHS to better evaluate, observe and treat more patients during the first 24 hours after reception screening.
- While beneficial, additional available space proximate to the Intake Center is not suitable for conversion to an infirmary level of care.

Because of the foregoing considerations it will be necessary for CHS to ensure that all newly received patients whose clinical condition indicates need for an infirmary level of care will be transferred to the LBJ Infirmary no later than 24 hours after booking. CHS will also need to establish a formal, continuous system of medical record review/monitoring to confirm that this 24 hour timeline is being met. It is feasible for the objective of CAP – 3 to be implemented as of April 1, 2011. This component will be assessed through ongoing monthly

and quarterly review by CHS and by me of representative medical records. The overall rate of monthly transfers from the 4th Avenue Intake Center to the LBJ Infirmary will also be tracked, trended and reported.

CAP – 4: **Health Assessments for Persons in Non-Acute and Stable Condition**

With implementation of CAP – 1 and CAP – 2, there will be a substantial decrease in the number of persons who will need to have their Initial Health Assessments (also known as Health Appraisals) completed between day 2 and day 14 following their Receiving Screening evaluations. The majority of such persons will have no significant acute or chronic medical conditions at the time of entry to the 4th Avenue Intake Center. A small number of such patients will exhibit onset of acute medical problems during their initial two weeks of incarceration and need to be promptly seen and evaluated with a complete Initial Health Assessment by a physician or PA/NP. For the far greater number of newly admitted persons who are in good condition, completion of the Initial Health Assessment can safely be done within 14 days after arrival at the 4th Avenue Jail.

At this time, Dr. Alvarez is reviewing several options with respect to content and effectiveness of the CHS Initial Health Assessment form and process. Among the questions he is considering are which types of professional personnel (CMT's, RN's, MD's, PA's, and NP's) should be involved in completing the Initial Health Assessment including the traditional Physical Examination for persons with no history of acute or chronic medical problems. Specific NCCHC standards pertain to these questions, especially with respect to scope of practice, training and oversight. Another important consideration concerns what components of the traditional periodic physical examination are supported by evidence-based recommendations of authoritative professional organizations, such as the U.S. Preventive Services Task Force. During the next sixty days, I will be having frequent detailed discussions with Dr. Alvarez regarding the content of the physical examination within the CHS appraisal and which professional personnel are appropriate for completion of this clinical task. By June 1, 2011, I will provide a more specific recommendation in this regard.

CAP – 5: **Nursing Care Staffing Expansion**

CHS currently has a full-time equivalent (FTE) complement of 88 Registered Nurses (RN), 59 Licensed Practical Nurses (LPN), 63 Correctional Health Technicians (CHT), and one RN

Discharge Planner. For their budget year 2010, CHS leadership has proposed adding 11 FTEs, including 6 RNs, 2 LPNs and 3 CHTs. They also anticipate a stand-alone supplemental budget request for 2012 funding will be submitted to address staffing needs not addressed in the original proposal.

In order to achieve compliance with SAJ requirements, I believe it is essential that the initial and supplemental requests noted above be approved by the Maricopa County Board of Supervisors and implemented as soon as possible by CHS. My most recent reviews of medical records show that there continues to be an unacceptable frequency of gaps in continuity of medical care and medication administration, as well as lapses in quality and documentation of RN-generated patient assessments and coordination of care between medical and nursing personnel. With the planned expansion of practitioner staffing in the 4th Avenue Infirmary and the resultant increase in Day 1 Initial Health Assessments, expanded RN and LPN staffing will be critically needed.

In recent discussions with me, CHS has also recognized the need to have an RN who has expertise in chronic wound care evaluation and treatment. This is a particular need for some patients served within the LBJ Infirmary but also for referrals from the other eight CHS outpatient health facilities.

It is reasonable to expect that the initially proposed nursing staffing for budget year 2012 can be phased-in between April 1 and September 1, 2012, including recruitment of an RN wound care specialist. Between April 1 and July 1, 2011, I will be in communication with CHS leadership to identify any other additions to nursing staffing required after September 1, 2011.

CAP – 6: **Physician Staffing and Chart Documentation at the LBJ Infirmary**

CHS has a well-written policy that defines the three levels of medical/nursing services available to patients in the LBJ Infirmary. Each of these three service levels is linked with a specified frequency with which the Infirmary's assigned physicians are expected to evaluate and document periodic medical evaluations and updates in each patient's plan of care. These frequencies are medically appropriate. However, my medical record reviews have identified a serious problem with the legibility of many physician generated Infirmary admission and progress notes. These types of illegible medical record entries truly impede effective communication and coordination among the physicians, nurses and other staff that need to understand and advance the plan of care. Therefore, I have asked Dr. Alvarez to identify and implement

an effective corrective action to ensure legibility of Infirmary physician entries as well as any other similar situations he becomes aware of in CHS health facilities. It is reasonable to expect that this objective be accomplished by June 1, 2011.

In concert with the changes described in CAP-1 and CAP-2, it is predictable that there will be a significant increase in the number and acuity of patients referred from the 4th Avenue Intake Center to the LBJ Infirmary on weekends and holidays. For this reason and also on the basis of prior experience, there are compelling medical reasons for the LBJ Infirmary to have on-site part-time (four hours per day) practitioner coverage on weekends and holidays. The primary duty of the practitioner providing this coverage will be to see and evaluate any new patients admitted to the Infirmary after 5 PM the prior day and also to evaluate and write progress notes for any other patients whose clinical condition dictates the need for such an evaluation. I propose that CHS phase-in this expanded physician coverage of the LBJ Infirmary between April 1 and August 1, 2011.

CAP – 7: **Evaluation and Treatment of Patients at Risk for Alcohol and Opiate Withdrawal Syndromes**

CHS already has in place use of the CIWA Scale (Clinical Institute for CIWA scale Withdrawal Scale for Alcohol) for

evaluation of patients at risk for alcohol withdrawal syndrome. CHS also has in place a treatment protocol for use of Librium, a benzodiazepine medication) that is consistent with authoritative professional recommendations including *Pharmacological Management of Alcohol Withdrawal – A Meta-analysis and Evidence Based Guideline* by M.F. Mayo-Smith, JAMA 1997; 278(2): 144-152: From the American Society of Addiction Medicine Committee on Practice Guidelines.

With respect to evaluation of persons at risk for opiate withdrawal syndromes, CHS is not now using a separate, distinct scale and validated evaluation scale such as the Clinical Opiate Withdrawal Scale (COWS) or the Clinical Institute Narcotic Assessment (CINA) Scale. By July 1, 2011 CHS will utilize the COWS to evaluate incoming patients with a prior history of use of opiates of any type including heroin, methadone, and analgesic such as oxycodone, dilaudid and codeine. For patients with a prior history of both alcoholism and opiate dependence/addiction, both the CIWA-Ar and COWS will be utilized.

CHS currently relies on use of clonidine, hydroxyzine, and loperamide for treatment of patients at risk for opiate withdrawal syndrome, including those who are being treated in community-based methadone treatment programs prior entry into the 4th Avenue Intake Center. As has been stated

repeatedly in my prior reports, patients participating in legal methadone treatment programs should continue to receive methadone maintenance after during their pre-trial detention. In addition, since methadone is medically preferable to clonidine in most respects, methadone needs to be available within the MCJ for use in an opiate withdrawal treatment protocol for patients who are heroin dependent. Two other drugs – Suboxone and Subutex – are also acceptable alternatives.

Dr. Alvarez and I are having ongoing discussions about his diligent efforts to secure the approvals and community partnerships necessary to provide methadone maintenance after jail entry and use of methadone or other drugs for treatment of opiate withdrawal. Multiple regulatory, legal, licensure and training issues remain to be resolved. There appear to be three main options, which are not necessarily mutually exclusive. These options are the following:

- A licensed and community-base drug addiction treatment network might be engaged to come into MCJ facilities to evaluate, counsel and treat patients receiving methadone maintenance or at risk for opiate withdrawal and addiction counseling and follow-up addiction treatment.
- CHS may be able to obtain Opiate Treatment Program (OTP) certification by the Substance Abuse and Mental