NMC Strategic Accomplishments:

12/31/11 to 12/31/12

NMC IT Operations Infrastructure:

To-date:

- **Meditech IDR Backup & Restore of Data:** conduct a test restore to ensure documented process is correct and restore is operationally functional: completed test restore of data: 12/12
- **Sophos Endpoint Encryption:** Sophos SafeGuard encryption software is designed to provide NMC workstations and laptops with the security required to protect confidential data from being accessed or captured by unauthorized users. It also strengthens NMC's compliance with the guidelines stated in the Health Insurance Portability and Accountability Act (HIPAA). The following important advantages have been implemented at NMC - completed: 09/12:
    - **Full-disk encryption** technology to protect data in the event the device (laptop or VDI Client) is lost, stolen or inactive for a predetermined amount of time
    - **lock laptops remotely** in the event the device is lost or stolen.
    - **decrypt the hard drive at start-up** to allow the user a normal experience when working on their computer - providing better performance over traditional file encryption methods
    - **Continuous data encryption** - when a device is powered down, Sophos will secure the hard drive by re-encrypting it once again.
- **California Telecommunication Credits:** NMC is now receiving a 50% discount on 'most' circuits delivered through AT&T: 4/12
- **Wireless Temperature Sensors** (from SensoScientific): implemented for automated temperature readings on pharmaceutical refrigerators: 10/12
- **Security Audit:** completed comprehensive security audit (external penetration test) from RedSpin: 7/12
- **WSUS server:** provisioned new server - completed: 12/12
- **Antivirus server:** provisioned new server - completed: 12/12
- **Picture Archiving and Communication System (PACS)**: Radiology - migrated system from old Clarion CX310 to new Netapp FAS 3140 filer: 12/12
- **Guest and Partner WLANs:** updated network topology diagrams for the Guest and Partner WLANs: 11/12
- **Solarwinds Orion Network Monitoring System**: upgraded Network, Application and Configuration monitoring and several new features were enabled and configured: 10/12
- Performed large scale re-composition of VDI images: 10/12
- **Performance Logic** (Healthcare Project Management Software): implemented a Linux server and software for Quality Department
- **Link State Tracking:** implemented to provide additional redundancy to our VMWare virtual environments by ensuring upstream uplink failures do not affect our redundant vswitch design. Link state tracking, tracks the state of the uplink trunk interfaces that go from our server switch block to our core - completed: 09/12
- **Meditech DR SQL server:** a new DR SQL server replacement was built and deployed to provide hardware and software redundancy - completed: 04/12

- **Meditech Performance Map**: created a network map for all NMC IT to use for troubleshooting Meditech performance and network issues. The "NMC – Meditech" map monitors the performance and network statistics for all Meditech File and BG servers. The values displayed are real-time statistics that are polled through SNMP - completed: 08/12
- **Windows 2008 server x32 Template**: built and customized a new template for Windows 2008 server x32 due to a software application that only supports 32 and not 64 or R2 x64
- **PACS Client for Specialty Clinic (SPC) VDI Images**: installed PACS web client software and a link to the PACS system on all VDI client systems in SPC so physicians can now access PACS images using VDI clients - completed: 08/12
- **Information Security Policy (InfoSec):** created new robust policy that defines Personal Health Information (PHI), Personally Identifiable Information (PII), Federal and state laws mandating information protection, Who is affected by this policy, and Managing confidential and/or highly confidential information - completed: 12/12
- **Patch Management Policy:** created new policy that defines maintenance windows, roles and responsibilities and enforcement - completed: 12/12
- **Wi-FI Policy:** created new policy that defines WI-FI Access Request Process, WI-FI Access Control Matrix, and use of wireless Bio-Medical Equipment - completed: 11/12

Future:
- Consolidate storage systems to a single vendor platform(NetApp)
- Position for an 8.X Data On Tap upgrade with the least amount of disruption as possible
- Use Bridgehead on NetApp by July 2013 in preparation for Co-location datacenter. Note: contingent on Meditech Certification
- Use SnapManager for X products for Exchange, VMWare, SQL Server, etc. to maximize existing investments
- Implement encryption for data at rest for all confidential information
- Hire a Database Administrator (DBA) to perform database assessments and develop a remediation plan for the following:
    - System monitoring - Solarwinds
    - Maintenance plan standardization
    - Backup schedule standardization
    - Backup location standardization
    - Access control standardization
    - Capacity planning standardization
    - Audit logging standardization
    - High Availability standardization
    - Patching - SQL updates standardization
    - Test environments standardization
- Update NMC Information Security Handbook with latest policies
- Wi-Fi Network: implement security enhancements
- Single Sign-on (SSO) RFP: create an RFP for SSO for NMC applications to improve application access and security

- Setup Co-location data center for NMC (possible San Diego location):
  - Phase 1: ability to send data off-site for protection
  - Phase 2: provide Meditech business continuity at remote site
  - Phase 3: provide Business Continuity for other mission critical applications

NMC IT Business Applications:

To-date:

- **Meaningful Use (Stage 1 MediCal) Attestation:** successfully submitted the Meaningful Use Stage 1 attestation application to the State of California for Year 1 of the MediCal EHR Incentive Program: completed 12/18/12
- **Meaningful Use (Stage 1 Medicare)** - Core Measures complete:
  - Menu Measure #1: Drug Formulary Checks: 11/9/12
  - Core Measure #2: Drug-Drug and Drug-Allergy Interaction: 11/12/12
  - Core Measure #4: Maintain Active Medication List: 11/12/12
  - Core Measure #5: Maintain Active Medication Allergy: 11/12/12
  - Core Measure #6: Record Demographics: 11/12/12
  - Core Measure #8: Record Smoking Status: 11/12/12
  - Core Measure #13 Electronic Exchange of Clinical Information: 11/12/12
  - Core Measure #14: Protect Health Information: 11/12/12
  - Menu Measure #2: Advanced Directives: 11/12/12
  - Menu Measure #3: Clinical Lab Test Results as Structured Data: 11/12/12
  - Menu Measure #4: Patient Lists: 11/12/12
- **Meaningful Use (Stage 1 Medicare)** - Core Measures in progress:
  - Core Measure 11: Electronic Health Information: 03/01/13
  - Core Measure 7: Record Vital Signs: 03/01/13
  - Core Measure 12: Electronic Copy of Discharge Instructions: 03/01/13
  - Core Measure 10: Clinical Decision Support Rule: 03/01/13
  - Core Measure 1: CPOE for Medication Orders: 03/01/13
  - Core Measure 3: Maintain Problem List: 03/01/13
- **Contract Management Dashboard:** 11/11-03/12
- **Bedside Medication Verification (BMV)**(Meditech): implemented the ability to electronically scan medication at the patient bedside using bar code technology: 07/11-06/12
- **electronic Medication Administration Record (eMAR)**(Meditech): implemented the ability to electronically record the administration of medications using bar code technology: 07/11-06/12
- **Transfusion Administration Record (TAR)**(Meditech): implemented the ability to electronically identify and track blood transfusion patients using bar code technology: 07/11-07/12
- **Computerized Provider Order Entry (CPOE)**(Meditech): electronic ordering at the patient bedside - implemented in the Emergency Department only: 07/11-03/12
- **Physician Documentation (Pdoc)**(Meditech)**:** electronic documentation at the patient bedside - implemented in the Emergency Department only: 07/11-03/12
- **Nuance Dragon Medically Speaking** voice recognition software: dictate bedside notes into the electronic medical record - implemented in the Emergency Department only: 07/11-03/12

- **ePerscribe (eRx) Dr.First software** – ability for physicians to electronically prescribe patient medications - implemented in the Emergency Department only: 07/11-03/12
- **Health Information Exchange (HIE):** researched different HIE vendors/partners to implement a private Health Information Exchange for NMC and Health Department Clinics – continue collaborating with CHOMP on community-wide HIE implementation. RFP draft complete 12/12
- **Business Intelligence (BI) Reporting Platform**: implemented a SQL reporting platform that will answer multi-dimensional analytical queries. 13 dashboards to date have been created: 09/11-05/12
- **BAR Module** (Meditech): created queries to identify registration/billing errors for auditing and enhanced performance
- **BAR Module** (Meditech): developed CDS that captures what type of errors are being made by the ADM staff
- **BAR Module** (Meditech): developed CDS that captures what type of errors are being made by the BAR staff
- **BAR Module** (Meditech): implemented new process between Meditech and Pyxis to process IV med Solutions on Supply Side while sending transactions to PHA and MM side of Meditech at the same time
- **BAR Module** (Meditech): developed an interface to GHX to allow outbound PO Acknowledgment back to MEDITECH
- **BAR Module** (Meditech): developed electronic ordering supplies for LAB to MM
- **BAR Module** (Meditech): Room and Board charging for NICU - added accommodation to capture all three levels of care for the NICU unit
- **BAR Module** (Meditech): developed NPR report for NMG to find accounts with overdue Charges
- Developed NPR report for Billing Department to find unbilled accounts in a Preliminary status
- **BAR Module** (Meditech): created a process for Salinas Valley Radiology to determine which accounts are client accounts and should not be billed
- **BAR Module** (Meditech): implemented the 835 remit for Medicare in the new 5010 format
- **ATB report**: developed report that produces aging out to 360 days as well as money due from each insurance vendor on the account.
- Configured Meditech to send notifications to Quality Management/Infection Control for desired Laboratory results
- Downloaded required CVX codes to Meditech CVX code dictionary
- Fully documented Meditech software functionality achieving Meaningful Use requirements for Drug-Drug and Drug Allergy checking (Measure 2C), Drug Formulary Checks (Measure 1M), Maintenance of Active Medication List (Measure 4C), Maintain Active Medication Allergy List (Measure 5C) and Clinical Decision Support Rule (Measure 10C)
- **Medication Reconciliation (Med Rec)**(Meditech): ability for physicians to compare a patient's medication orders to all of the medications that the patient has been taking to avoid medication errors such as omissions, duplications, dosing errors, or drug interactions – implement house-wide: 03/01/13

- **ePerscribe (eRx) Dr.First software**: ability for physicians to electronically prescribe patient medications – implement house-wide: 03/01/13
- **Med Problem List** (Meditech)**:** technical implementation of the Meditech Med problem list and roll-out to all physicians – implement house-wide: 03/01/13
- **OBIX** (fetal monitoring system): Phase 1 complete by 02/01/13
    - NMC IT Cabling Milestone 1: Critical Locations (12/28/2012)
    - NMC IT Cabling Milestone 2: MIU Locations (1/18/2012)
    - Receive OSHPD approval (10/10/2012)
    - Begin RFP for Construction Bid (12/11/2012)
    - Software Installation complete (1/4/2013)
    - Testing (1/2/2013 – 1/21/2013)
    - Training (1/21/2013-1/28/2012)
    - OBIX Go-Live: rolling cutover (1/28/2013-2/1/2013)

Future:
- **CCD Interface for MU Stage 1:** implement Meditech's Continuity of Care interface. Needed for Meaningful Use Stage I and will be enhanced for Stage II
- **Meaningful Use (Stage 1 Medicare) Attestation:** 90 day reporting period starts 3/1/13
- **Meaningful Use Stage II:** implement enhancements to existing Core Measures, new measures and more CQMs. Emphasis will be on data exchange
- **Patient Portal for MU Stage II:** implement a patient portal (Meditech's?). Required to meet several Meaningful Use II measures
- **Ambulatory** (Practice Management System)**:** outpatient clinics Ambulatory system to be used for scheduling and documentation for NMG, Specialty Clinic, NIDO, Diabetic education
- **Meditech full version Upgrade:** from 5.64 (currently) to 5.66. Upgrade needed for MU Stage II software components
- **Medical Necessity** (Meditech)**:** compliance driven - implement the ability to electronically verify medical procedures are necessary
- **Authorization and Referral Management (ARM)**(Meditech)**:** make Physicians authorization forms (RACS &TARS) available electronically
- **ProVation Order Sets:** replace Zynx order set software with ProVation order set software
- **Operating Room Management (ORM) Module:** replace Picis OR manager software with Meditech's ORM
- **Risk Management Module** (Meditech)**:** improves the quality of services and ensures the overall safety of patients, visitors, and staff
- **Quality Management Module** (Meditech)**:** reduces risk of legal liability and financial loss
- **Patient Care System (PCS)** (Meditech) Specialty Clinics**:** implement PCS for clinical documentation in Specialty Clinics

- **Computerized Provider Order Entry (CPOE)**(Meditech): electronic ordering at the patient bedside – implement house-wide
- **Physician Documentation (Pdoc)**(Meditech)**:** electronic documentation at the patient bedside – implement house-wide
- **Nuance Dragon Medically Speaking** voice recognition software: dictate bedside notes into the electronic medical record – implement house-wide
- **Materials Management Module (MM) Optimization** (Meditech)**:** MM/AP interface, MM/Pyxis item file interface, electronic requisitioning, Electronic data exchange (GHX), re-order process automation, Meditech/Advantage interface for purchase orders
- **Meditech OSHPD Data:** Optimize, Correct deficiencies in MT build and NMC process that affect patient OSHPD data integrity
- **Cardio Management:** replace failing Echo system and implement all CP modalities
- **PeerVue:** Radiology - automates communication and workflow throughout the exam lifecycle
- **Powerscribe** 360: Radiology front-end speech recognition reporting solution
- **Physician On-Call Schedule:** develop an online Physician on-call schedule for viewing/distribution to multiple groups
- **Med Mined:** regulatory tracking software that scrubs LAB and Pharamcy data to determine if NMC Pharmacy practices are up to speed and in accordance with current and future policies
- **Patient ID – Wristbands:** Implement new wristbands to meet several new organizational needs
- **ICD-10** (house-wide)**:** transition from ICD-9 to ICD-10 Diagnosis & Procedure Coding Translation
- **Nursing Productivity Automation:** Automate the process of generating the nursing productivity report
- **Online Eligibility**: implement 3M software to electronically determine patients insurance eligibility
- **Clinical Quality Measures** (CQM's) Stage II

Health Information Management Department (HIMD) / Medical Records

To-date:

- **Vital Registry** – The entire process was restructured, new forms created in English /Spanish and NMC HIMD hand delivers the completed birth certs within 5 days of birth to the PH Dept. Registrar – implemented: 03/12
- **Forms Committee** – reestablished the committee and reviewed backlog of forms requests. All forms must be approved by the committee, before submitting to a vendor – implemented: 04/12
- **ROI /Meaningful Use** – Restructured the process. HIMD staff will be re-tested and re-trained on process enhancements the first week of Jan 2013 and report to MU Project Team in mid January 2013. Policy & Procedure submitted to the CIT approved in November 2012. ROI - HIMD no longer excepts/handles cash. Checks (Fees for records) are reconciled, recorded and submitted to the business office every other Tuesday.
- **MPI Merging**: all duplication chart numbers daily notifications are addressed within 24 hours – implemented: 05/12

- **Scanning**: The following units now have the ability to scan loose filings into the patient chart: Audiology, Outpatient Surgery, Ortho, Diabetic, Coumadin Clinics. Note: HIMD is now currently scanning NMG Purged records. HIMD is currently in process of training all staff and preparing for the scanning of 2013 inpatient discharges.
- **OSHPD Data Submission**: resolved 18 month OSHPD issue regarding Observation Data collection. NMC IT was able to successfully map Meditech so information could be captured during abstracting
- **Business Office Requests**: this process was redesigned so that no more than five cases by the end of each week should be remaining at which point, a list generated by the B/O is submitted electronically to the HIM Director and Day Office Supervisor and the requests are processed by the main file room staff daily and a status report is sent to the HIM Director nightly.
- **HIMD Workflow Redesign:** all HIMD staff (including Pro-fee Coder & ED Scanners) were relocated to one centralized work area – completed 11/12
- **RAC Audits**: fixed submission delays with process change. New bi-weekly meetings with Audit Nurse, Coding Manager and HIM Director were implemented
- **ICD-10 Assessment(3M):** ICD-10 Organizational Readiness Assessment performed by 3M – completed: 11/12. The findings presentation was given to hospital Administration on 11/29/12. Findings and recommendations documentation was received by the hospital on 12/26/12

Future:
- Upgrade 3m (Softmed) software application to allow electronic chart analysis, chart deficiencies, in-house transcription, electronic signatures
- Implement Dragon Natural voice recognition software for Physician dictation to replace current hand-held dictation
- ROI – burn PHI onto CD and or copy to thumb drives and or send using encrypted email to patients, lawyers and government entities for Meaningful Use compliancy
- Implement new Request and delivery methodology for Request of Information from public by leveraging existing business office processes and procedures.