Information Systems Advisory Committee
Recommendations to the Director, IHS
September 24, 2003

The recommendations below were prepared by the Information Systems Advisory Committee (ISAC) in response to impediments that the Information Technology Support Center has encountered in completing mandated and priority tasks. The ISAC recommends that the following actions be taken to resolve the stated concerns.

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Issue: **Support for the IHS Electronic Health Record**

Background: The IHS Electronic Health Record (EHR) provides an electronic medical record capability within the Resource and Patient Management System (RPMS). The EHR is a feature rich system that includes: provider order entry (of medications, laboratory tests, procedures, radiology tests and consults); clinical decision support with reminders, alerts, order checking; note authoring and a unified electronic signature capability. The anticipated outcome of this project is to create an automated medical environment that is not dependent upon hard-copy chart movement, which improves clinical efficiency, enhances documentation, reduces waiting times, increases collections, and raises patient and employee satisfaction.

The EHR will be alpha tested in January 2004 with beta site testing anticipated in March 2004. Deployment to 20 sites will be accomplished by September 2004 consistent with the OMB's Program Assessment Rating Tool requirement.

Once alpha and beta testing are complete, a rapid roll out of the EHR is anticipated. Significant site support is anticipated as implementation takes quite a bit of preparation, has several technical requirements, and has specific software upgrades required prior to use. The roll out will consist of 6 to 9 new or enhanced software applications coming out all at once. It will also require immediate technical and clinical support as clinicians will be using it in a live patient encounter mode.

Recommendations:

- Recommend that IHS Headquarters (HQ) immediately support funding for the IHS-EHR development, roll-out and support. This funding will be required to ensure rapid deployment, long-term successful support, and sustained clinician satisfaction with this process change.
- Recommend that the IHS/Office of Management Support/Division of Information Resources (IHS/OMS/DIR) develop and disseminate the EHR software package to service units, especially those interested in beta testing, including documentation that clearly delineates needs and expectations, hardware, software requirements and personnel recommendations.
- With participation of the Office of Public Health, the DIR should establish a well defined support, training and implementation program.
- The IHS should partner with the Veterans Health Administration (VHA) to assist in the implementation, training and support of the EHR.
- Recommend that the IHS pursue integrating technologies developed by the Department of Defense in their electronic medical record project called CHCSII, especially worth consideration is their note authoring solution.

Issue: **Site Preparation for the Electronic Health Record (IHS-EHR)**

Background: In the past year the DIR has aggressively pursued assimilation of numerous VHA software packages which are required to obtain the functionality of their Computerized Patient Record System (CPRS). It is necessary that the IHS/Tribal/Urban (I/T/U) sites install this software in order to prepare for the implementation of the IHS EHR. In addition, because the current RPMS operating system, Micronectics Standard Mumps, is no longer a commercially supported product, it is necessary that the I/T/U sites convert to newer and more advanced operating system from InterSystems, called CACHE. The I/T/U sites also need to ensure that their infrastructure (RPMS Server, Local Area Network and personal computers) is sufficient to facilitate operation of the EHR.

Recommendation: Recommend that I/T/U sites immediately begin to install patches/upgrades (e.g., File 200, Cache, etc.) to RPMS systems in preparation for roll-out of new RPMS package versions this year. These enhancements will increase functionality and will be required to get on the priority installation listing for IHS-EHR.

Issue: **IT Funding Requirements – 5 Year Projection**

Background: DIR has presented the 5 Year Funding Requirements ($82.2M over five years) to various leadership groups (e.g., ELG and IHLC). Funding was not available at that time. Funding for IT has been well below the industry norm for medical institutions. A realistic funding level should be attained in order to support new technologies that greatly benefit the IHS health care effort.

Recommendation: Recommend DIR update the projected 5-year Information Technology costs to bring the current infrastructure up to current industry standards.

Issue: **Data Quality – Verification of Social Security Numbers**

Background: IHS has a collaborative arrangement with the Social Security Administration (SSA) in which IHS sends SSA a file of patient demographic information including unverified Social Security Numbers (SSNs). If, for an entire individual's record, there is a 100% match between both the IHS national and the local facility's data and those at SSA, software allows the local site to mark, in an automated fashion, all the SSNs for those records as verified. All those records with SSNs that cannot be verified are flagged so that the local site can review and add or correct their data. These corrected records are subsequently resubmitted to SSA for verification. In this manner, local sites can use these tools and reports to progressively increase their rates of verified SSNs.

No one is verifying SSNs being identified as wrong at the local levels. The ITSC has tapes coming back from the SSA showing the persons that have numbers that are not verified (names and numbers don't match, or the birthdates or gender don't match). The IHS needs to work on these updates at the local levels.

Recommendation: Recommend that I/T/U sites urgently resolve the unverified Social Security Numbers in their registration database. Increasing the verified SSNs to 95% is critical to the implementation of the Master Person Index and increasing eligibility information.

Issue: **FTS Billing**

Background: The current billing information from MCI WorldCom is inaccurate and untimely, creating various accounting problems for the IHS Areas and Headquarters. Though there are corrective efforts being made, many problems still exist. A major problem is the re-distribution of funds from the reimbursement group, Universal Services Administration Corporation. Funds are collected for many Areas, but are not disbursed according to respective costs.

The ITSC has an FTS billing project in place and has been working on getting the phone bills throughout IHS in an accurate form (i.e., identifying numbers not being used, phone numbers that were not IHS' that IHS was paying for, and getting a usable phone bill that identifies information the IHS can use to be more efficient). This is being done through the ITSC's United States Department of Agriculture (USDA) agreement for the development and provision of FTS reports and the Parsons project which is an HHS agreement for FTS reconciliation.

Recommendation: Recommend that DIR correct the web-based FTS billing spreadsheets for FY2002, so that the figures can be used – as needed – for tribal negotiations. Disseminate information to the tribes and Areas so they are aware of and can take corrective actions – such as reviewing circuits listed, etc. ISAC refers this issue to the ELG to determine if FY2002 FTS billing by finance should be re-evaluated and funds shifted. The ISAC also recommends continued funding of the USDA contract to produce accurate telecom costs.

Issue: **Program Effectiveness – Measuring Business Process Improvement**

Background: Given the current budget reductions, and increased expenses, business process improvement is a top priority for the IHS. The business process of lowering costs and increasing revenue requires innovative thinking and implementation. Without proper measurement, there is no way to determine our success in this effort.

Recommendation: Recommend the implementation of measurable national multidisciplinary benchmarks related to business process improvement. Periodic reports will be posted to EISS.

Issue: **IT Consolidation and Streamlining**

Background: The current IT infrastructure for supporting email and other office automation services have grown from local or Area Office initiatives. To reduce operational costs, improve efficiency, and ensure security it is necessary that a consolidation plan for these resources be established.

Recommendation: Recommend that the DIR develop a plan for streamlining infrastructure in accordance with the HHS IT consolidation metrics. This should include consolidation of servers, improved business and procurement practices, capital planning and new technologies.

Issue: **Strengthening Security**

Background: Security is the highest Departmental information technology (IT) priority and it is critical that all IHS IT systems are secure while supporting all aspects of our mission. The Internet has become one of the most widely used tools for supporting a growing number of applications and support services. In order to maintain a secure network, it is critical that a comprehensive set of policies and practices be in place to insure that a secure environment is maintained. The IHS has done a comprehensive update of general security policies

The IHS has components accessing the Internet through servers other than the ones IHS has in place. This makes the IHS network vulnerable to outside threats that are not going through the IHS firewalls and security measures we have in place to protect the network.

The ITSC will be working with tribes in their negotiations this year on security agreements that cover use of the IHS network and require compliance with Federal security policies if the tribe will be using the IHS network.

International partner access needs to be carefully reviewed prior to use. An example of this is some locations are buying billing services through international partners. There are very strict Federal contracting rules that must be complied with prior to entering an arrangement such as this. Tribal sites that use their own networks are not subject to Federal contracting rules unless they've agreed to follow them through their contract/compact, but if they are using the IHS network, they would need to work with their Area/HQ contracting and IT staff to resolve any contracting issues prior to allowing international partners access to the IHS network.

Recommendation: Recommend that the security policy be amended to include:

- Any additional Internet connections or business partner access be protected at the same level at existing Internet access points (e.g., firewalls, access lists, SMTP routing, etc.)
- Area/SU sites be notified that contracts with international business partners be reviewed by contracting (for security clearance) before access is granted to the IHSNet.

Issue: **Workforce planning for information technology**

Background: In order to successfully implement and support the EHR and other new software programs it is necessary that additional technical and clinical application support be provided at the local facility level.

Recommendation: Recommend that DIR provide sample position descriptions and staffing models for technical and clinical support specialists to Areas and Service Units. The field sites are encouraged to immediately evaluate their existing capacity and hire new staff as needed. DIR should work with facilities and planning staff to integrate the staffing needs into the Resource Requirement Methodology and Health Services Planning.

Issue: **Section 508 Compliance**

Background:

Section 508 Standards for Accessible Electronic and Information Technology (E&IT) were developed to establish the minimum level of accessibility for E&IT developed, procured, maintained, or used by Federal departments and agencies. Essentially, E&IT are any products that store, process, transmit / receive, convert, or duplicate data or information. Technical Standards for 508 include:

- Software Applications and Operating Systems
- Web-based Intranet and Internet Information and Applications
- Telecommunications Products
- Video and Multimedia Products
- Self Contained, Closed Products
- Desktop and Portable Computers

The Section 508 governing documents are (1) Section 508 of Rehabilitation Act as amended in 1998; (2) Section 508 E&IT Accessibility Standards and (3) Final Federal Acquisition Regulation (FAR) Rule for Implementing Section 508. This law became effective June 21, 2001. The Standards and Guide to Section 508 for E&IT are located at:

http://www.access-board.gov/sec508/508standards.htm .
http://www.access-board.gov/sec508/guide

Section 508 requirements do not apply retroactively to E&IT existing prior to June 21, 2001. Even though the standards do not apply to pre-existing E&IT, it is the intent of HHS and the IHS to meet the spirit of the law, especially as it relates to pre-existing HHS/IHS web sites. As the IHS upgrades and changes E&IT, the Agency must meet or exceed Section 508 Standards. However, the IHS (directly and through contracting mechanisms) continues to develop, procure, maintain, and use E&IT products, including new or modified web pages, hardware, and software, without meeting or exceeding Section 508 compliance. This creates significant problems and additional costs when E&IT products must later be modified to bring them into compliance. The IHS programs, contracts, and contractors need to ensure that E&IT products meet or exceed established Section 508 standards. Contracts need to comply with Section 508 Standards and IHS requirements in accordance with the Federal Acquisition Regulations on E&IT Accessibility.

Recommendation:

- Recommend that all new or modified web pages created by IHS Web Developers or contractors be required to meet or exceed all of the web development standards, policies and guidelines issued by the Federal Government, HHS, IHS and Section 508. This will prevent legal issues and significant costs associated with the rework of

web sites.

- Recommend IHS develop a "Section 508 Implementation Plan" in accordance with the "HHS Policy for Section 508 Implementation" Draft document dated March 17, 2003.

Issue: **Capital Planning – IT Investment Review Thresholds**

Background: An ITIRB is required to comply with the Clinger Cohen Act (CCA) and is required as a capital planning and investment control process for assessing and selecting investments. All government agencies must comply with the CCA to receive funding. The continuing resolutions this FY required anything over $500,000 to go to the HHS ITIRB. They actually want to see anything, regardless of dollar amounts, that the IHS ITIRB is reviewing.

The IHS IT projects that have to go through the IHS-specific ITIRB process include IHS enterprise-wide systems, any IT project that will be used by more than one IHS office or division, and IT projects that require alterations to the existing IHS IT architecture. The IHS needs to establish a threshold for IT projects/procurements.

Raines Rules, commonly known throughout the Federal government as the "Three Pesky Questions," are used in addition to the determining factors above as to whether projects require an ITIRB review. They are:

- Does the project support a mission that must be performed by the Federal government?
- Are there cost effective alternatives in the private sector or other government sectors?
- Has the current work process been simplified or re-engineered to make maximum use of Commercial-Off-The-Shelf (COTS) technology?

Recommendation: Recommend the ITIRB threshold of $300,000 (one-time) or $500,000 (over five year life-cycle) be used by all IHS sites rather than the ITIRB qualitative indicators. This threshold will assist in streamlining the process.

Issue: **Video Conferencing**

Background: All IHS Areas have video-conferencing equipment. As a general rule, if an Area notifies the ITSC of a call, then the ITSC sets up a "bridge call." Some problems encountered with video-conferencing include: notifications received for video-conferences don't give the time of the call, the duration of the call and a contact person to work with if they are having problems.

Additionally, problems can occur when all Areas are on the call, but the Areas not able to video into the conference usually call in and the ITSC adds these sites on by audio.

The ITSC has developed a Video-Conferencing Tuning Plan to assure that the quality of the video is acceptable. Areas will need to coordinate video-conferencing activities with the ITSC to eliminate future problems. The ITSC has a Video-Conferencing Request Form that should be used by all Areas requesting these services.

Recommendation: Recommend that additional efforts are made concerning the implementation of video conferencing solutions to ensure that IHS sites can reliably utilize this technology and maximize its benefits.