UNITED STATES GOVERNMENT

Memorandum

DATE: December 18, 1978

TO: Director's Committee for Computer Assistance Procurement
Thru: Chief, Laboratory Service

FROM: Microbiologist, Laboratory Service

SUBJ: Summary Report of the First Veterans Administration Patient Care Management Information Seminar, Oklahoma City, December 11-14

The meeting was sponsered by the Computer Assisted Systems Staff (CASS), VACO. The CASS group has been in operation for only a few years and already they have provided technical guidance and financial assistance to place 21 computers into VAMCs nationwide. Their effort is organized in the manner that each station demonstrating expertise in software applications will receive computer hardware to promulgate programming applications as they relate to the improvement of direct medical care for VAMC patients. All software applications are being written in a high level programming language, MUMPS (Massachusetts General Hospital Utility Multi-Programming System) in order to insure standardization and subsequent transportability from station to station. For the most part, applications which were presented at the meeting and discussed herein, have been developed *prior* to receipt of computer hardware.

Recommendations for implementation of a computer system at this station will follow the session descriptions.

1. MEDICAL ADMINISTRATION SUPPORT SYSTEM (MAS)

1.1. Purpose: to increase efficiency and quality of medical records and subsequently increase capability for ambulatory-care patient visits (Okl. City VAMC has already demonstrated an increase of greater than 40% for such patients)

1.2. Applications which will be available for distribution by July 1979:

1. *Centralized ambulatory-care patient registration*
2. *Centralized ambulatory-care patient scheduling*
3. *Inpatient admission-transfer-discharge module* to facilitate bed control through gains and losses approach
4. *Medical Record Security System* through assignment of User Class Identifier (UCI) alphanumeric codes. Logs will be maintained for each UCI access to patient data in order to ivestigate any breach of security. Various levels of security will be assigned by System Manager

2. DIETETICS SERVICE APPLICATIONS

2.1. Purpose: to calculate therapeutic diets tailored to individual patient's nutritional requirement

2. DIETETICS SERVICE APPLICATIONS (cont'd)

2.2. The following applications are currently under development at Lexington, Ky. and Seattle, Wash. VAMCs and will be available by Fall 1979:

1. *Therapeutic diet configuration within 10-15 minutes based on nutritional analysis of approxiamtely 300 food items*
2. *Nutritional analysis of recipes*
3. *Estimates of demand for food purchase*
4. *Menue planning and tray distribution*

3. SOCIAL WORK, MEDICAL RECORDS, DISTRICT INFORMATION, *etc.*

3.1. Purpose: to discuss various applications developed at station-level and Medical District-level

3.2. Software programs were presented by five participants

3.2.1 William Bancrost, VAMC, Birmingham, Alabama
1. *Social work tally applications*

3.2.2 Marty Ivers, VA Medical District 27, San Francisco, Calif.
1. *Pacemaker monitoring program*
2. *Patient treatment file data base*- there are currently 500,000 discharged patient files on tape at UCLA
3. *Tumor registry*- currently involved in network of six tumor centers

3.2.3 Chuck Leahey, VAMC, Wash., D.C.
1. *Pulmonary function screening program*
2. *In-depth pulmonary function calculation programs*
3. *Stress testing applications*

3.2.4 Bruce Beebe, VAMC, Salt Lake City, Utah (applications available Feb. 1979)
1. *Interview drivers, i.e.* patient reads and answers testing questions (*e.g.* psychological) at CRT terminal

3.2.5 Roy Swatzell, VAMC, Birmingham, Alabama
1. *Personnel Strength Reporting (PSR)*- program is currently being translated from BASIC language into MUMPS; information is taken from payroll cards (form 8B) and compiled to provide Service by Service breakdown of available manpower; useful for determining personnel ceilings
2. *Summary printouts of Medical Records*- allows condensation of a patient's medical record into pertinent factual summary

4. RADIOLOGICAL SCIENCE APPLICATIONS

4.1. Purpose: to provide interpretation of *in vivo* and *in vitro* clinical data generated by Nuclear Medicine Services. Of the 172 VAMCs, 39 have no Nuclear Medicine Service and another 25 have inadequate ones.

4.2. Applications were presented by two participants

4.2.1 Bob Wickizer, Harry S. Truman VAMC, Columbia, Missouri
1. *Missouri Automated Radiology System (MARS)*- provides centralized processing capabilities to remote laboratories lacking sophisticated instrumentation.
2. *Static and Dynamic image processing for in vivo testing*
3. *RIA (in vitro) data interpretation*

4. RADIOLOGICAL SCIENCE APPLICATIONS (cont'd)

4.2.2 Joe Tatarczak, VAMC, Albany, N.Y.

1. *Static and Dynamic image processing*
2. *Miscellaneous hospital reports, e.g.* monthly fiscal service reports
3. *MAS implementation test site*
4. *Regional EKG monitoring program for Medical District II*

5. MENTAL HEALTH APPLICATIONS

5.1. Purpose: to apply automated data processing to facilitate rapid clinical assessment of patients

5.2. Applications have been or are currently being developed in the following areas of Mental Health; the VAMCs generating the programs immediately follow each category:

1. *Psychological testing* - Bay Pines, Salt Lake City (SLC), Loma Linda (LL), Minneapolis (Minn.), Pittsburg-Highland (P-H), Topeka, Columbia, S.C. (CSC), St. Cloud Minn. (SCM)
2. *Mental status*- Bay Pines (BP), SLC, LL, Atlanta, Ga. (ATL)
3. *Treatment planning*- LL, Brentwood
4. *Substance abuse*- LL, VACO
5. *Medical Histories*- SLC, BP
6. *Patient discharge*- Oklahoma City (OKC)
7. *Physical Examination*- SLC
8. *Reviewal Systems*- SLC
9. *Biofeedback*- Bedford (Bfd), Supulveda (Sup), White River Junction (WRJ), LL
10. *Diagnostic Standards Manual (DSM III)*- Atl.
11. *Statistical Support*- Sup., LL, Perry Point (PPt), West Haven (WH)
12. *Progress notes*- open
13. *Services Utilization- (tracking system to maintain log of personnel rendering services to patients)* SLC
14. *Computer-assisted instruction (CAI) programs*- SLC

6. CLINICAL LABORATORY APPLICATIONS

6.1. Purpose: to provide automated data processing and handling capabilities for each section within the Laboratory Service using OMB Circular A109 approach which encourages parallel development of such systems

6.2. Participants in this session included: Richard Walters, VAMC, Davis, Calif.; Marty Ivers, VA Medical District 27, S.F., Calif.; George Timson, VAMC, S.F., Calif.; and Robert Perreault, VAMC, Houston, Texas. Dr. Quentin Federman, scheduled session chairman, did not attend.

6.2.1 Robert Perreault, VAMC, Houston, Texas

1. *Application currently programmed in FORTRAN which interfaces SMA 6 & 12, Coulter S, and SMAC into Honeywell system. System utilizes card punch and mark sense which is limiting and lends itself to errors.*

6. CLINICAL LABORATORY APPLICATIONS (cont'd)

6.2.2 George Timson, VAMC, S.F., Calif.

1. *Described commercial laboratory application systems currently available in Standard MUMPS language:*
   a. *Massachusetts General Hospital - 1967*
   b. *Meditech & AHS - 1969*
   c. *Rubicon - 1975*
   d. *Compucare - 1975*
   e. *Medical Data Consult System (MDC)*- Loma Linda 1975*
   f. *University of Arizona - 1975*
   g. *Beth Isreal Hospital - 1975*

**MDC System expected to be marketed by Technicon*

6.2.3 Marty Ivers, VA Medical District 27, S.F., Calif.

1. *Global Perspective* - arrangement of laboratory data must be compatible with MAS module

6.2.4 Richard Walters, VAMC, Davis, Calif.

1. *Documentation file design, i.e. files arranged according to laboratory (e.g. Chemistry, Hematology, etc.)*

6.3. Addendum: Since Dr. Federman did not appear at the sessinns, the full extent of clinical laboratory applications is not known. Personal telephone communication with Dr. Federman indicated that instrumentation interfaces would be available for distribution sometime in November 1979, however this is very tentative at present.

7. INFECTION CONTROL APPLICATIONS

7.1. Purpose: to provide hospitals with a means for control of hospital-acquired infections, its priority was established

7.2. Applications have been limited in this area since Infection Control depends on data generated from the Microbiology Laboratory which thus far has no software developed.

7.2.1 Tom Munnecke, VAMC, Loma Linda, Calif.

1. *Infection Control Applications have been written in MIIS which is a dialect of MUMPS.* A copy of the program will be requested for review.

8. RECOMMENDATIONS FOR IMPLEMENTATION OF A COMPUTER ASSISTANCE SYSTEM AT THE BUFFALO, NEW YORK, VAMC

8.1. Immediately, create a position for PROGRAMMER-SYSTEMS ANALYST, GS-13, who will serve as System Manager and assist in the development of a Microbiology - Infection Control software application package which will when completed, be offered for use throughout the VA System.

8.2. Encourage Dr. Montes to pursue applications in Surgical and Anatomical Pathology in collaboration with Dr. E. Gabrielli.

8. RECOMMENDATIONS FOR IMPLEMENTATION OF A COMPUTER ASSISTANCE SYSTEM AT THE BUFFALO, NEW YORK, VAMC (cont'd)

8.3. Encourage involvement of Clinicians through dissemination of Applications information already or expected to be available and invite ideas for the development of additional software application programs.

8.4. Reapply to VACO for funding which was requested under "E" wing construction project #528-022 for Data acquisition and Handling System, submitted on form VA 10-1348a, May 4, 1977 and subsequently deleted by program officials. To this end, Mr. J. Ted O'Neill, Director, CASS, will lend his support through his channels in VACO. New Construction funding is a preferred method for purchasing such systems since there is no limit on the amount and paperwork does not have to pass through the Department of Data Management (DDM), the agency responsible for the defeat of many systems.

8.5. Resubmit the revised purchase order (07-134) to VACO for approval since it is a controlled item. This can be done as soon as our 'unique medical application' is determined, probably within the next couple days after I've had a chance to further consult with Mr. Marty Ivers and Mr. Marty Johnson. Pursuit of the application will be in the area of Microbiology and/or Infection Control.

8.6. In summary, we stand a very good chance for securing a computer assistance system. If we act quickly and play our cards right we might probably be able to computerize the Ambulatory Care Service and Medical Administration Service within the year.

William J. Heaslip

William J. Heaslip, RM(AAM)

Attachments: Seminar Agenda
Attendance List

Distribution: Mr. James Cuer
Mr. Ned Hill
Dr. Mario Montes
Dr. Nick Reinagel
Mr. Mel Saile
cc: Dr. Eugene Gorzynski
Dr. Thomas Beam
Ms. Carolyn McDermott,RN

FIRST

VETERANS ADMINISTRATION

PATIENT CARE

MANAGEMENT INFORMATION

SEMINAR

AGENDA

December 11-14, 1978

Sponsered by Central Office
Computer Assisted Systems Staff

Monday, December 11

8:30 Opening Remarks

Dr. Richard F. Walters, Conference Moderator

Mr. Frank W. Caldwell, Director Oklahoma City V.A.M.C.

Dr. Walter Whitcomb, Chief of Staff, Oklahoma City V.A.M.C.

Dr. David Wilson, Laboratory of Medical Informatics

Mr. J.T. O'Neill, Director, CASS

Mr. Martin Johnson, CASS

9:30 Medical Administration Support System - Dr. David Wilson, Session Chairman

11:00 Break

11:15 Dietetics Applications
Dr. Richard Davis, Session Chairman

12:00 Lunch

2:15 Programming Considerations
Mr. Thomas Munnecke, Session Chairman

3:15 Break

3:30 **Technical Session (1)

Tuesday, December 12

8:30 Clinical Laboratory Application
Dr. Quentin Federman, Session Chairman

10:00 Break

10:15 Radiological Science Applications
Mr. Robert Wickizer, Session Chairman

12:00 Lunch

1:30 Equipment Profiles
Dr. Richard Davis, Session Chairman

2:30 Break

2:45 **Technical Session (2)

Wednesday, December 13

8:30 Mental Health Applications
Dr. Robert Lushene, Session Chairman

10:00 Break

10:15 Mental Health (ctd.)

12:00 Lunch

1:30 Social Work, Medical Records, District Info., etc.
Mr. Roy Swatzell, Session Chairman

3:15 Break

3:30 **Technical Session (3)

There is a meeting for Mental Health Participants only on Thursday, November 14, beginning at 8:30 a.m. in room 420 in the Oklahoma University Health Sciences Center Library.

**Mr. George Timson, Chairman for Portability and Application Interface considerations; Dr. Arden Forrey and Mr. Thomas Munnecke, Co-Chairmen for documentation.

The meeting on December 11-13 will be held at the Oklahoma Health Sciences Center Library in the auditorium. The library is located in the medical center at 1000 Stanton L. Young Boulevard. The phone number is (405) 271-2285.

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