USING A DATABASE FOR FOLLOW-UP CARE OF PAP SMEARS IN FAMILY PRACTICE

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USING A DATABASE FOR FOLLOW-UP CARE OF PAP SMEARS IN FAMILY PRACTICE

By

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ABSTRACT

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By

Pamela J. Tarras

This Project was initiated in order to demonstrate how a database may be used to target appropriate, systematic follow-up of pap smear results. The database record can then be used to generate reports of patients who have not kept follow-up appointments and their charts can be reviewed for needed action.

The project used pap-smear results as an example of how this process is done and what reports may be generated. It was also pointed out that a database in family practice can be expanded to such areas as utilization review, quality assurance, and research. Using a database in family practice would improve care through more consistent follow-up.

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Thank you to my family, especially my children, Todd, Brian, and Aaron, for their support and patience during my educational pursuits. Thank you to Chuck for his help and support. And thank you to Don, I wish you could be here to see me complete this project. You always believed in me the way no one else did.

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INTRODUCTION

A primary care provider offers continuing, comprehensive, and coordinated medical care to a population (Solberg et al., 1990). Nurse practitioners are playing an increasingly important role in primary care and family practice (Campbell et al.,1990; Kimball & Young, 1994). McClelland, Kelly, & Buckwalter (1985) described continuity of care as "a right of every client" and as an ideal that should become a professional and governmental expectation. They further said that coordinating, communicating, and follow-up are necessary to achieve continuity of care.

Even though the outpatient setting consumes an enormous share of overall health care resources, the methods for evaluating continuity of care, follow-up, and outcome measurements are very primitive. In the Minnesota Project (Solberg et al., 1990), out-patient records were reviewed for a quality assurance study. It was found that nearly 25% of the records did not qualify for the study due to lack of follow-up and

patient noncompliance. Solberg et al. attributed the lack of follow-up methods in out-patient settings to high volume, vagueness of diagnosis, lack of consistent recording systems, and the desire of private practice providers for noninterference from outside sources.

BACKGROUND

Elaborate quality assurance programs, discharge plans, outcome measurement studies, and research have been done within hospitals and large health care organizations. Surprisingly, in family practice, follow-up of patient care ranges from inconsistent and disorganized, to almost nonexistent (Eisenberg & Kabcenell, 1988). Lack of continuity of care is also a major patient complaint (Headrick & Neuhauser, 1994). Eisenberg and Kabcenell suggested that improvement in quality of care should start in clinical practice, at the local level, if a significant impact is to be made.

PURPOSE OF THE PROJECT

A computerized database in primary care may be used to strengthen continuity of care through the implementation of

standardized accessible patient monitoring. The purpose of this project is to develop a plan to use a data base in family practice to improve continuity of care through systematic follow-up of pap smear results and appropriate interventions. Evaluation and follow-up of pap smears is the clinical procedure targeted in this project.

LITERATURE REVIEW

Each year approximately 15,000 women in the United States are diagnosed with cervical cancer. Miller, Losh & Folley (1992) state "morbidity and mortality from cervical carcinoma can be reduced if pap smears are obtained at the appropriate intervals, and if prompt evaluation and treatment are performed when abnormalities are found" (p. 143). Even though follow-up of abnormal pap smears has been documented to be important, an audit in the United Kingdom of 1,062 women with cervical abnormalities has shown that 41% had unsatisfactory follow-up care and 15% had no follow-up pap smears (Mant, 1994).

Miller et al. (1992) suggest that follow-up of pap smears has become increasingly important, related to new trends of increased numbers of Human Papillomavirus (HPV) infections and younger women

having increased incidence of cervical dysplasia and carcinoma. These increases of HPV, cervical dysplasia, and cancer pose new challenges to family practice for the follow-up care of patient pap smears (ibid).

The National Cancer Institute (NCI) (1994) recommends an annual pap test for all women who have been sexually active or who are over 18 years of age. The pelvic exam and pap test increases the rate of early detection of abnormal cellular changes on the cervix. Scientists believe that abnormal changes of these cells is the first step in a series of changes that may lead to cancer in later years (Miller, Losh, & Folley, 1992). Therefore, early detection, follow-up, and treatment could prevent invasive and incurable cervical cancer.

The Centers for Disease Control and Prevention, the National Cancer Institute, and the U.S. Food and Drug Administration coordinate and support screening and follow-up as a major component of prevention of cervical cancer. Screening and follow-up of pap smears are mandated by the Breast and Cervical Cancer Mortality Prevention Act of 1990. Pap smear result classification systems, either World Health Organization, Bethesda, or Cervical Intraepithelial Neoplasia Systems, all have clear explanations and recommendations on reports for follow-up of abnormal pap smears: either repeat the pap smear in 3-

6 months or perform a colposcopy. For inflammation, the recommendations vary, from culture and repeat pap smears to colposcopy, depending on patient history (Miller et al., 1992). Miller et al. recommend guidelines to prescribe for inflammation on pap smear reports (See Appendix A).

In 1995 the American Foundation of Public Health reported that cervical cancer screening was failing, based on the cancer registry showing no decrease in the incidence of cervical cancer in the past thirty years. The American Foundation of Public Health reported ten specific reasons for the failure of current screening methods, and of those reasons, four were related to follow-up (Miller, 1995). They are:

1. Failure of the physician to recommend further investigation and treatment of an abnormality.
2. Failure of the woman to attend for the recommended investigation and treatment.
3. Inadequate treatment of the abnormality.
4. Inadequate follow-up of the women treated for the abnormality.

These areas of failures and inadequacies could be corrected by using a data base system. A data base could help in each area, respectively:

1. Flagging abnormal results requiring review and action by the provider.
2. Flagging the patients with abnormal results who did not keep their follow-up appointments. These women could then be phoned, encouraged, and told how important follow-up is.
3. Follow-up of repeat pap smears for return to normal reports.
4. Flagging abnormalities for follow up.

"Screening for cervical cancer is based on the theory that all invasive cases are preceded by a series of precursors that can be detected by cervical cytology (pap smears) and treated" an assumption that has been supported by many screening programs in North America and Europe (Miller, 1995).

Literature clearly supports the need for more consistent follow-up of pap sears. A database can be used to help correct this problem, by providing complete and reliable records of when a pap smear or follow-up is needed. For purposes of this project, pap smears were used as the data base. In a family practice setting the data base could also be expanded to include all female patients in the practice population. The dates when pap smears are considered due or overdue may be established by using the American Medical Association guidelines published in 1996 in The Complete Guide to Women's

Health, and the NCI (1994), which states pelvic exams and pap tests be done every year (Allison, 1996).

CONCEPTUAL FRAMEWORK

The nursing process is the framework for this project. The nursing process is an organized and systematic framework with deliberate activities based on the following five steps: (a) assessment, (b) diagnosis, (c) planning, (d) implementation, and (e) evaluation (Bolander, 1995, Alfaro, 1986) (See Figure 1).

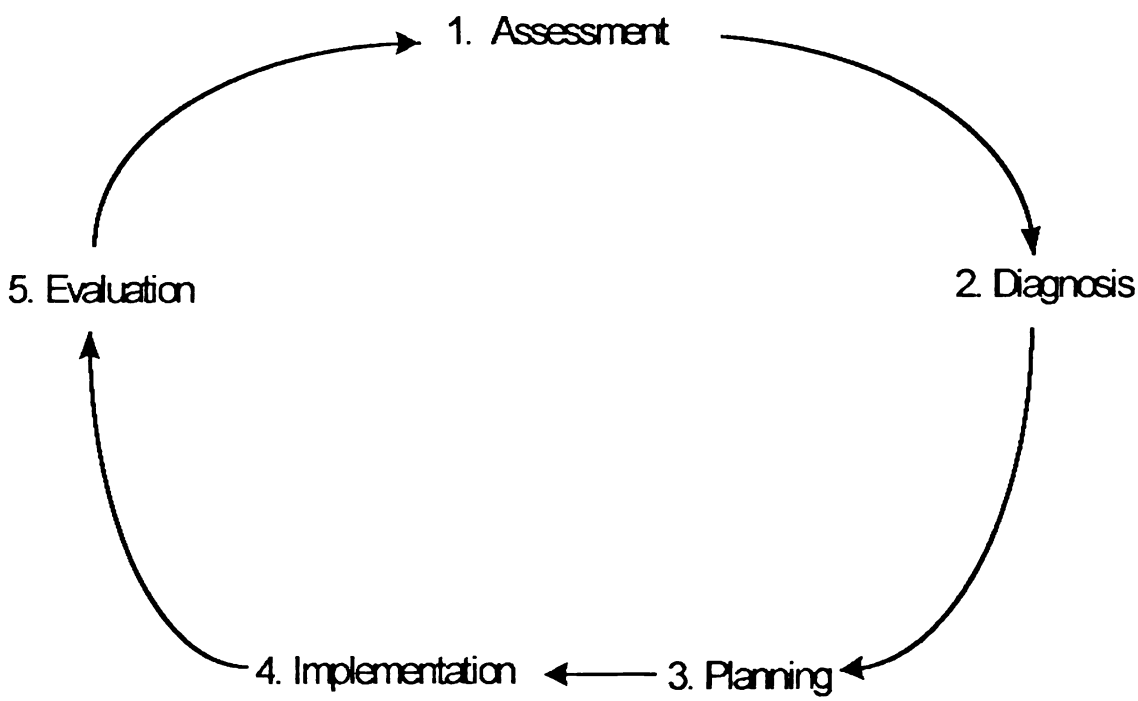


Fig. 1. Nursing Process

Though the nursing process has long been a part of nursing, using a database to assist in this process is relatively new. A data base can store large amounts of patient information accurately and without fear of loss or bias. Thus using a database for e.g., the follow-up of pap smears assures that the nursing process will be complete and continuous.

Clinical assessments are done every day in family practice. Diagnosis and planning are also consistently done, but that is usually where the nursing process either stops or is inconsistently completed. Not only are implementation (follow-up procedures) and evaluation (was follow-up done?) inconsistently done but there is not even a system to monitor whether it was done. A database would provide the clinician with a consistent way to complete the nursing process by assuring follow-up.

The power that a database can have was seen through my work setting up a database for the College of Nursing at Michigan State University. A database has the capacity to easily store large amounts of information, and this information can be quickly searched and retrieved for both clinical and research use. In this project, consistency of follow-up will be assured by periodic retrieval of patient names who have not had their recommended follow-up care done by the dates

entered in the follow-up column on the database reports (see Appendix C).

In the nursing process, formalized steps are valuable for communication and documentation. Bolander (1994) described the nursing process as a systematic way to solve problems. This systematic 5-step process, reviewed below, is exactly why a database can be used effectively as the framework for following up pap smear results and improving continuity of care in family practice.

1. **Assessment** is gathering information (or data) in order to identify who has potential or real health needs, and what those needs are. Important decisions are made based on an accurate and complete assessment.

Alfaro (1986) further analyzes assessment into the components of *data collection, validation, organization,* and *pattern identification.* It is also a continuous process.

Data collection includes information gathered directly from patients, from patients' families, from previous charts, and from other health care providers who have worked with this patient. Much data is gathered by an interview of the patient and family, obtaining a history, and performing a physical assessment (Alfaro, 1986).

Validating data means using assessment skills to make sure the information gathered is correct. This is done by examining and reviewing the subjective and objective data collected. Also, observation of cues used by the patient during the interview and examination can be a valuable validating tool.

Organizing the information gathered is done to identify actual or potential problems.

Pattern Identification of a problem can more easily be done with organized data. A diagnosis can be made for each problem.

2. **Diagnosis** can be described as "a statement that clearly describes a health problem," or a potential health problem (Alfaro, 1986 p. 56). Alfaro (op. cit. p. 59) further categorizes problems into two areas: nursing diagnoses and collaborative diagnoses. "Nursing diagnoses are problems that can be prevented, resolved, or reduced through independent nursing interventions" (ibid). Alfaro also describes a collaborative problem as one that "can be prevented, resolved, or reduced through collaborative or interdependent nursing interventions" ibid). A patient may be seen in a family practice office by a Family Clinical Nurse Specialist (FCNS) for complaints of arthritis pain. An independent intervention would be to prescribe an anti-inflammatory medication, whereas an interdependent intervention would

be collaborating with the physician and obtaining a prescription for narcotic medication. Independent and interdependent interventions are actions that can legally be done independently or interdependently under the direction of another licensed professional.

Alfaro (1986 p. 60) further defines a collaborative problem as "an actual or potential problem that may occur from complications of disease, diagnostic studies, or medical or surgical treatment, and that can be prevented, resolved, or reduced through collaborative nursing interventions" (ibid).

Potential complications from an abnormal pap smear may be categorized as a collaborative problem if a FCNS could not resolve it independently and would refer to a specialist physician. When writing a collaborative diagnostic statement, because it cannot be treated independently, it cannot be found on the North American Nursing Diagnosis Association (NANDA) list of accepted nursing diagnoses. A collaborative diagnosis for a pap smear may be, potential for cervical cancer due to cervical dysplasia or abnormal pap smear.

3. **Planning** involves setting priorities, establishing goals, determining interventions, and documenting the plan, once the diagnosis is formulated (op. cit.). If there is more than one diagnosis, determination of which problems need to be taken care of soon, which

are more threatening, or which are easily resolved, is decided by setting priorities. Setting goals is an important part of planning, in order to know what is to be accomplished and when the desired outcomes are expected.

In this project, goals will be established based on standards of care in family practice for pap smears. Guidelines for follow-up are based on Miller, et al. (1992) (see Appendix A) and the NCI (1994). Interventions and planning are also based on these guidelines and pap smear results.

4. **Implementation** is the process of putting the plan into action and documenting what was done.

5. **Evaluation** includes assessing the completion of goals and outcomes, and from these results reassessing and adjusting the entire process. As indicated earlier, the nursing process is continuous, and the relationship of the nursing process, in Figure 1, to this project may be shown in more detail as Figure 2.

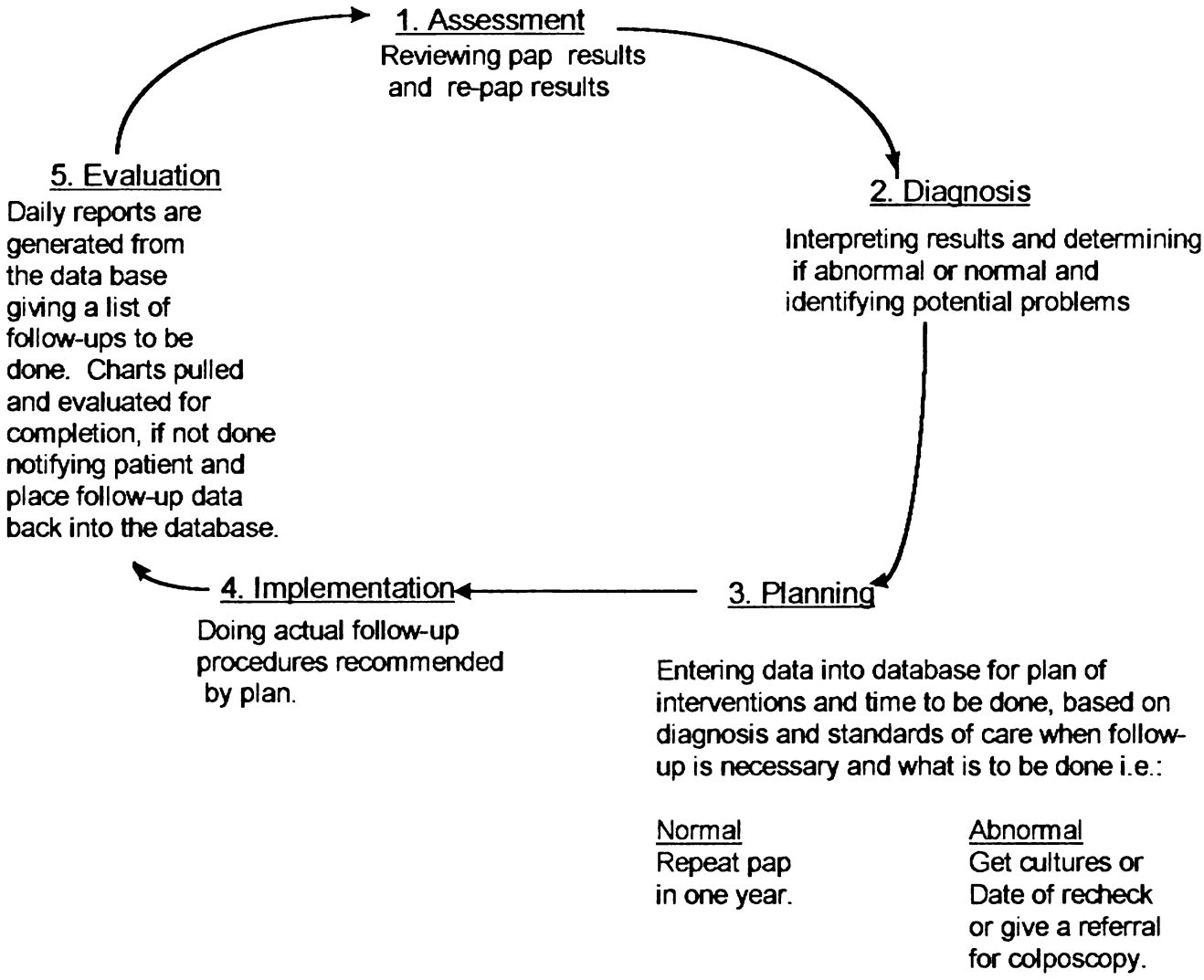


Fig. 2. Relationship of Nursing Process to this Project

METHODOLOGY

Microsoft Access was selected for use in this project because of its ready availability, and wide compatibility with other computer hardware and software. Access is also easy to learn and would take minimal training for clerical workers to use. The clerical time involved in the day-to-day entry of follow-up dates into the database would be minimal and could easily be done without any addition to the office staff. The initial database set-up would take the greatest amount of time, but it needs to be done only once, and it can be done by clerical help.

The database information entered is divided into two categories: demographics and clinical information. Demographic information used in the database includes the patient's name, a secure identification number, and information about where the patient can be reached (phone number, and address, etc.). Clinical information includes procedure date, results of reports, and follow-up date desired. One additional field contains any additional information the provider may want to use. Detailed information on creating and using the database is given in Appendix D.

Twenty cases of pap smears, done in April 1996, were used as

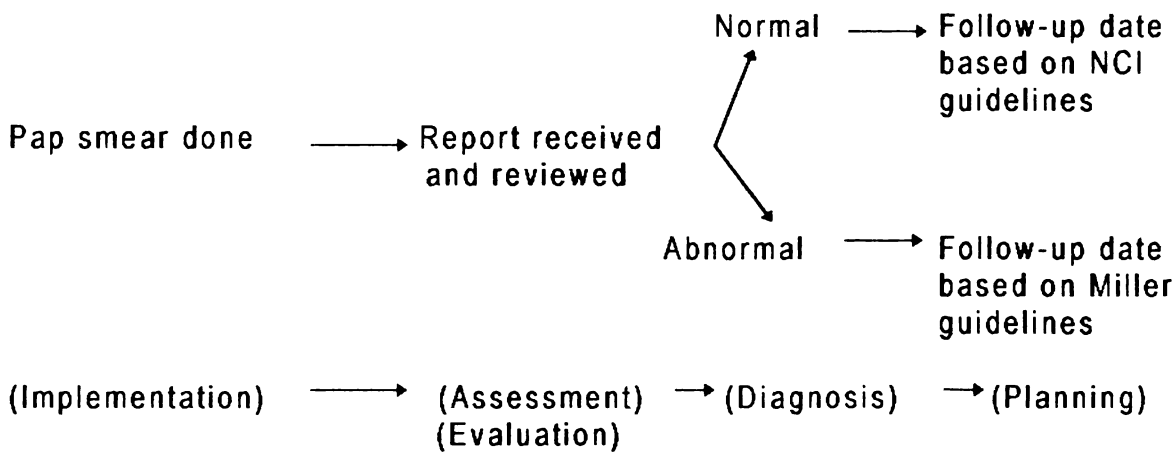
an example of how this project would work.

PLAN FOR USE

Pap smears are done on a daily basis in a family practice office. Results of these pap smears are completed in the laboratory in approximately one week and reports are sent to the office. An example pap smear report is shown as viewed in Appendix B. Each report is reviewed by a clerk and read to be normal or abnormal. If the results are normal the patient is notified (postcard or phone call) and a follow-up date for the next pap smear (based on NCI standards of one year) is entered into the database by the clerk. If the results are abnormal the clerk pulls the chart and gives the chart and report to the health care provider. The health care provider then reviews the chart for history and associated clinical symptoms, e.g. cervicitis or abnormal vaginal discharge, and then determines what follow-up will be done and when. Current actions are taken and follow-up dates for future actions needed are determined. These dates are written on the lab report by the provider and then given back to the clerk. The clerk then enters this information into the data-base in the follow-up, results, and plan fields (see Appendix C).

Each day the database is queried, and a report printed, for patients who were to be seen for care or follow-up care by the previous day, and their charts are pulled. The charts can then be reviewed by the clerk to determine if the recommended follow-up was done. If it was not done, charts are reviewed by the provider for recommendations. For example, the clerk may be asked to make phone calls to the patients and reschedule appointments. This process could also be done on a weekly basis.

The plan for this process may be summarized as follows:



IMPLICATIONS

This system can be expanded in many other areas in family practice. A patient's name is entered into the database as demographic information, and thereafter each diagnosis is entered into the database as clinical information. These diagnoses are related to each other (or relational) by the patient's name or demographic information. Using a relational database can be useful in family practice if you were going to follow your patients in multiple categories (See Figure 3).

IMPLICATIONS FOR PRACTICE

Some examples may be taken from the top 10 diagnoses most frequently seen in family practice (Taylor, 1990). The most frequently seen is patients with high blood pressure. Not only can visits, follow-up visits, and numerical blood pressure visits be monitored, but other important information related to controlling blood pressure can be monitored, e.g. renin levels, microproteinuria for kidney damage, diet teaching, exercise, and weight levels.

Flat file (a) vs. Relational (b) Database Sturcture

(a)

Fields

	← Demographics →							← Clinical →			
Cases	ID#	Last	First	Street	City	State	Zip	Phone	Pap	Follow-up	Results	Plan
1	1034	Smith	Anne	First St.	Gains	MI	48752	593-6521	4/9/96	10/9/96	Normal	
2	1035	Baker	Mary	Tenth St.	Paris	MI	48756	583-9561	7/12/96	1/12/96	Normal	
3	1036	Thoms	Kaye	Oak St.	Gains	MI	48752	593-4780	5/17/96	6/14/96	Abnormal	
4	1037	David	Tina	Elm St.	Paris	MI	48756	583-0049	12/3/96	3/3/96	Abnormal	

(b) **Person Table**

Fields

Cases	ID#	Last	First	Street	City	State	Zip	Phone
1	1034	Smith	Anne	First St.	Gains	MI	48752	593-6521
2	1035	Baker	Mary	Tenth St.	Paris	MI	48756	583-9561
3	1036	Thoms	Kaye	Oak St.	Gains	MI	48752	593-4780
4	1037	David	Tina	Elm St.	Paris	MI	48756	583-0049

Pap Table

Fields

Pap	Follow-up	Results	Plan
7/12/96	1/12/96	Normal	
5/17/96	6/14/96	Abnormal	

HBP Table

Fields

ID#	Date	Follow-up	Renin	Microprotein	Diet	Exercise	Weight
1034	4/9/96	10/9/96				None	264
1035	7/12/96	1/12/96				Daily	133

Fig. 3

Why is this important? Heart disease continues to be the number one killer of men between the age of 45 - 65 and the second highest killer of women in the same age categories in the United States (Department of Health and Human Services, 1995). Monitoring and follow-up care of blood pressure levels could have a significant impact on death rates due to heart disease.

Acute upper respiratory infections (URI) is the second most frequently seen diagnosis in family practice. This diagnosis appears as a one time incident visit, but what if this is the fifth one in 3 months? The pattern of illness/visit frequency can also be monitored. Is there is an underlying problem? Allergies? Immune suppression? A community or environmental problem? Patterns of visits can be made on an individual basis or across the practice for analysis, thereby benefiting both the practitioner and the patient.

General examinations are the third most frequent reasons patients present to family practice. There may be multiple uses for data collection from a general exam or physical (e.g. using guidelines for age categories and as a reminder and more consistent following of recommendations such as EKG, mammograms, lipid levels, etc.). These follow-up dates can be changed according to patient risk factors identified by the practitioner or abnormal values.

All of the top 10 diagnosis seen in a family practice office could fall into one of these categories of reasons a database may improve practice and delivery of care, to monitor, follow-up, identify patterns and as reminders of routine care needed. It can be used in health promotion, risk identification, disease maintenance, and illness.

A database can also be used to analyze and monitor utilization patterns by patient or by provider. An example of using a database for identification by patient is: one patient may have 15 visits in one year for sinusitis. If this pattern is identified in the database, it may prompt the provider to look for possible underlying problems which may be aggravating his sinuses such as polyps or allergies.

An example of using a database for pattern identification by provider is: a provider may be ordering an expensive antibiotic for bronchitis. If this pattern is identified in a database, a less expensive antibiotic, with equivalent effectiveness, may be identified for use. This information may be used for cost analysis, problem identification, and the effect of modifications of these patterns.

IMPLICATIONS FOR RESEARCH

Outcomes are another important area that may be improved by using a database in a family practice setting. An example of using a

database for monitoring outcomes is: a provider may begin using a new medication to treat high blood pressure. Blood pressures may then be taken and recorded in the database. The database blood pressures may then be reviewed for all patients taking this medication and the effectiveness of the medication evaluated. Outcome research is necessary for the continuation and advancement of practice, what interventions or medications work, and which ones do not work.

Our practice is research based and a database can collect the data needed for this research accuracy in high volumes and make it easily retrievable for analysis. An example of high volume research may be monitoring a physicians entire practice for blood pressure control. This could be thousands of patients in some practices. This volume of information can be accurately collected by using a database to enter all blood pressures taken and then easily retrieved as a report for analysis. This could be expanded to monitor the blood pressures of a city or even an entire state. Using a database system in primary care will be a valuable tool in improving family practice.

IMPLICATIONS FOR EDUCATION

A database can have valuable use in education because of the ability to store high volumes of information with quick accessibility.

The data and research information obtained from analysis can be used to teach current and research based practice to students and providers.

PLANS FOR USE AND EVALUATION OF THE DATABASE

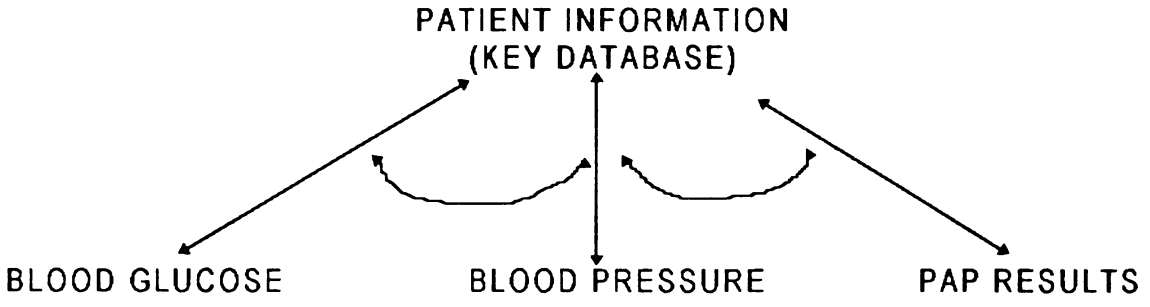
My future plans for use and evaluation of this database will begin by assessing patient's follow-up patterns of pap smears. Follow-up visits will be assessed, with current follow-up practices, documenting follow-up patterns for one year. The next year, a database will be used for follow-up. Evaluation of a database system for follow-up will then be made by comparing year one, follow-up without a database with year two, follow-up with a database. This comparison will determine if a database system is a useful tool to improve follow-up patterns.

The database used in this project is considered a flat database, or a "list" of information. This database can also be expanded to a relational database, which would expand its uses in family practice and allow for more data to be stored and retrieved.

A relational database has the same two categories of data entered: demographic information, and clinical information. However, it also has/can have more than one file of clinical information, you may

have pap smears in one, blood pressures in another, and blood glucose levels in yet another. This means not having to reenter the patient information for each diagnosis although each diagnosis is a separate "file" or category.

A diagram of this may be as follows:



Practice patterns can be identified also, which may be used for multiple purposes. Among these purposes are problem identification, needed interventions, and research. Practice patterns may include number of follow-up visits per patient, number of follow-up visits per diagnosis, number of referrals by diagnosis, and determination of patients needs.

Outcomes of practice can also be followed using this database. Outcomes of practice are valuable for improving practice, validating interventions, and research. A database in family practice has many uses and can improve both current and future family practice.

APPENDICES

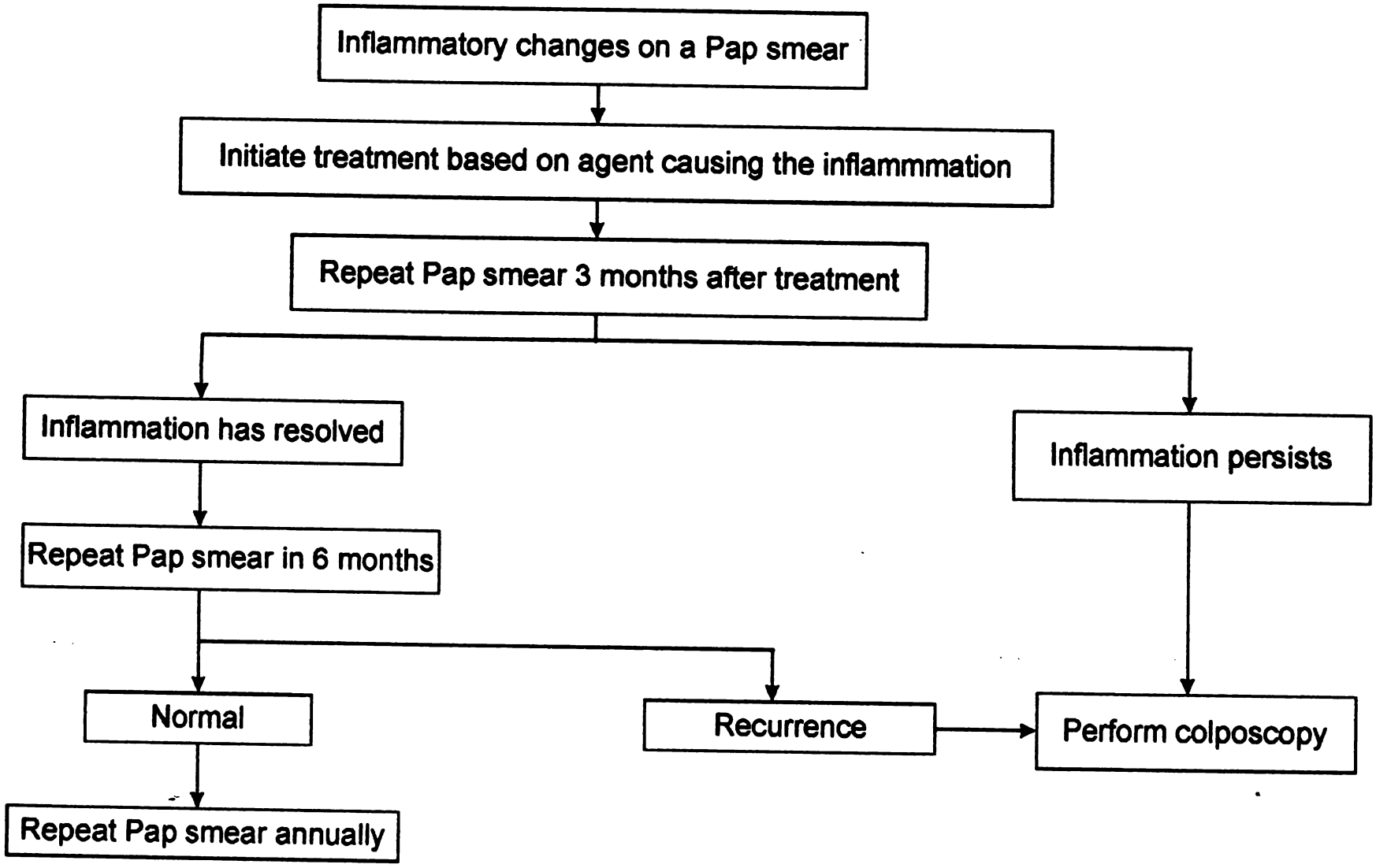
APPENDIX A

RECOMMENDED GUIDELINES FOR PRESCRIPTION OF INFLAMMATION ON PAP SMEAR REPORTS

Appendix A

Recommended Guidelines for Prescription of Inflamation on Pap Smear Reports

(After Miller, Losh, & Foley, 1992.)



APPENDIX B

SAMPLE PAP SMEAR REPORTS

04/24/96 | 05/01/96 111036

119 10V41 54 | SOF

PAM SHELBROCK, F.C.-N.S.
700 BORTON
BAY CITY, MI
48732

106488

'TOLOGY - FEMALE GENITAL
PATIENT HISTORY

LMP 1993

CLINICAL HISTORY
POST MENOPAUSE

SOURCE CX, ENDOCX, VAG

OF SLIDES 1

'TATEMENT OF ADEQUACY
SATISFACTORY FOR INTERPRETATION BUT LIMITED BY,
INFLAMMATORY EXUDATE OBSCURING EPITHELIAL CELLS
ENDOCERVICAL/METAPLASTIC COMPONENT PRESENT

ENERAL CATEGORIZATION
WITHIN NORMAL LIMITS

ESCRIPTIVE DIAGNOSIS
NO ATYPICAL CELLS IDENTIFIED
HORMONAL STATUS COMPATIBLE WITH CLINICAL HISTORY PROVIDED

CH ID ACM

STING SITE
TEST PERFORMED AT CORNING CLINICAL LAB
10953 FARMINGTON RD. LIVONIA, MI. 48150

APPENDIX C

DATABASE REPORT

Appendix C

LAST NAME	FIRST NAME	STREET ADDRESS	CITY	ST	ZIP	PAP DATE	FOLLOW-UP	RESULTS	PLAN
C1166410323	N/A	N/A	N/A	MI		4/25/96	5/2/96	NORMAL	BENIGN CHANGES; CULTURE AND REPAP IN 3 MONTHS
C1136406102	N/A	N/A	N/A	MI		4/22/96	4/29/96	NORMAL	BENIGN CHANGES; CULTURE AND REPAP IN 3 MONTHS
C1206411350	N/A	N/A	N/A	MI		4/29/96	5/6/96	NORMAL	BENIGN CHANGES; CULTURE AND REPAP IN 3 MONTHS
C1076407062	N/A	N/A	N/A	MI		4/16/96	4/23/96	NORMAL	BENIGN CHANGES; CULTURE AND REPAP IN 3 MONTHS
C1206414736	N/A	N/A	N/A	MI		4/29/96	10/29/96	NORMAL	REPAP IN ONE YEAR
C0926403491	N/A	N/A	N/A	MI		4/1/96	10/1/96	NORMAL	REPAP IN ONE YEAR
C1036401187	N/A	N/A	N/A	MI		4/12/96	10/12/96	NORMAL	REPAP IN ONE YEAR
C1005408123	N/A	N/A	N/A	MI		4/9/96	10/9/96	NORMAL	REPAP IN ONE YEAR
C1166400738	N/A	N/A	N/A	MI		4/24/96	10/24/96	NORMAL	REPAP IN ONE YEAR

LAST NAME	FIRST NAME	STREET ADDRESS	CITY	ST	ZIP	PAP DATE	FOLLOW-UP	RESULTS	PLAN
C1166410323	N/A	N/A	N/A	MI		4/25/96	10/25/96	NORMAL	REPAP IN ONE YEAR
C1166409952	N/A	N/A	N/A	MI		4/25/96	10/25/96	NORMAL	REPAP IN ONE YEAR
C1076407199	N/A	N/A	N/A	MI		4/16/96	10/16/96	NORMAL	REPAP IN ONE YEAR
C1006408109	N/A	N/A	N/A	MI		4/9/96	10/9/96	NORMAL	REPAP IN ONE YEAR
C1006408159	N/A	N/A	N/A	MI		4/9/96	10/9/96	NORMAL	REPAP IN ONE YEAR
C1106403287	N/A	N/A	N/A	MI		4/19/96	10/19/96	NORMAL	REPAP IN ONE YEAR
C1036401202	N/A	N/A	N/A	MI		4/8/96	10/8/96	NORMAL	REPAP IN ONE YEAR
C1096411231	N/A	N/A	N/A	MI		4/18/96	10/18/96	NORMAL	REPAP IN ONE YEAR
C0936411301	N/A	N/A	N/A	MI		4/1/96	10/1/96	NORMAL	REPAP IN ONE YEAR

LAST NAME	FIRST NAME	STREET ADDRESS	CITY	ST	ZIP	PAP DATE	FOLLOW-UP	RESULTS	PLAN
C1006408161	N/A	N/A	N/A	MI		4/9/96	10/9/96	NORMAL	REPAP IN ONE YEAR
C1076415893	N/A	N/A	N/A	MI		4/16/96	10/16/96	NORMAL	REPAP IN ONE YEAR
C1066410271	N/A	N/A	N/A	MI		4/15/96	10/15/96	NORMAL	REPAP IN ONE YEAR
C1216401818	N/A	N/A	N/A	MI		4/29/96	10/29/96	NORMAL	REPAP IN ONE YEAR
C1146404061	N/A	N/A	N/A	MI		4/23/96	10/23/96	NORMAL	REPAP IN ONE YEAR
C1136406152	N/A	N/A	N/A	MI		4/22/96	7/22/96	ABNORMAL	ASCUS; CULTURE REPAP IN 3 MONTHS
C1156400142	N/A	N/A	N/A	MI		4/23/96	7/23/96	ABNORMAL	ATYPICAL SQUAMOUS CELLS; CULTURE REPAP IN 3 MONTHS
C1156402817	N/A	N/A	N/A	MI		4/23/96	7/23/96	NORMAL	INFLAMATION; CULTURE REPAP IN 3 MONTHS

APPENDIX D

CREATING AND USING THE DATABASE

Creating the Database

1. Select Microsoft Access from the menu options.
2. Select the "new file" icon (white icon).
3. Choose a name for the database file, and then press enter (i.e. pap follow-up).
4. Select the "table" tab then click on "new".
5. Select the "new table" icon.
6. Under "field name", type in the appropriate information predetermined for your database needs (i.e. first and last name, address, dates, etc.)
7. Next to each of the "field name" is "data type" which is needed to distinguish what style the data is (i.e. text, dates, times, etc.)
8. Each of the fields can be customized with the "field properties" section (i.e. field size, format, required, etc.).
9. Repeat steps 6, 7, and 8 as many times as required to fulfill the desired information.
10. Select the "save" icon.
11. Select the "X" in the upper right hand corner of the window.

Recalling the Database

1. Select the Microsoft Access icon.
2. Select the "open database" icon.
3. Select the name of the desired database.
4. Highlight the name of the database and select the open icon.

Adding to the Database

1. Scroll to the last entry.
2. Input the required information concerning the patient.
3. Select the "save" icon.

Creating Database Reports

1. Select the "edit filter/sort" icon.
2. In the field space enter the desired criteria (i.e. name, date, etc.).
3. In the sort space enter the desired fashion of sort (i.e. ascending or descending).
4. Select the "apply filter/sort" icon.
5. Select the "print" icon to establish a hard copy of the report.

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