Oklahoma State Department of Health
Patient Flow Analysis

Guide Book
for
County Health Department Clinics

Adapted from
Patient Flow Analysis: Data Collection Manual &
Patient Flow Analysis for Windows:
WinPFA Data Entry Manual, and
Interpretation and Use of WinPFA Reports (Draft)
Centers for Disease Control and Prevention
Atlanta Georgia

Oklahoma State
Department of Health
Creating a State of Health

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Contents

Introduction

This guide will provide instruction on data collection and interpretation for OSDH Patient Flow Analysis. This material has been adapted from the Centers for Disease Control and Prevention (CDC) *PFA Data Collection Manual*[1] *Patient Flow Analysis for Windows: Data Entry Manual*[2], and the draft *Interpretation and Use of WinPFA Reports Manual*[3]. The first two modules of the manual will help counties plan and implement data collection of for Patient Flow Analysis. The last two optional modules will assist county health departments in using and interpreting PFA data should they wish to do this process on their own.

What is Patient Flow Analysis (PFA)?

PFA is a software-supported system that tracks patient flow and the user of personnel in health department clinics. Managers can use PFA to collect data for statistical documentation and graphical representation of a clinic session. The data can then be used to identify problems in client flow, identify personnel and space needs, and track personnel costs related to the clinical services in a specific clinic.

Managers planning a study should be aware that the current software has removed restrictions in previous version on numbers of clients, staff participating, and clinic length. Counties that have used previous versions of the software should consider updating to the current version of the WinPFA program. Consideration should be given to study design and the best alternatives to obtain the needed information. Assistance with the development of factors to include in the study is available from the OSDH staff.

Counties may also choose to do PFAs without including cost data. Since the necessary data are available in County Specific Personnel Budgets, it is recommended that this data be included so it will be available for future studies if desired. You may choose to not analyze this aspect of the data each time you complete a study with the primary goal of determining clinic flow and staffing issues.

The PFA Process: Planning and Implementation

The process that occurs before and after the PFA study is often more beneficial than the graphs and statistics produced as tangible products. Completing a PFA study catalyzes change in the clinics processes by responding to staff's concerns; by refocusing on customers; and by increasing information available to managers. Used effectively, the PFA can be a team-building tool that will result in greater communication, better understanding of roles and needs of different departments, and improved continuity of client care. Participation and cooperation between all levels of the organization are necessary for success of the process.

<u>Specific and Unique Roles in the PFA Process</u>

- *Study Coordinator*: the person responsible for carrying out the study. The person should be unbiased and receptive to the needs and ideas of staff. In the OSDH PFA Process this person may be from the Central Office or may be from the county or district being studied.
    - Questions to consider when selecting the Study Coordinator
        1. Does the person have the skills needed? (Such as effective communication and people skills)
        2. Does this person realistically have the time to devote to the activities generated by this study?

3. Will this person be able to view the findings of the PFA objectively?
4. What is the staff's perception of this person?

- *Management's Role*: Both top management and staff must see the potential of the PFA process for success to be achieved.
  - Determine if PFA is the appropriate management tool to meet the desired goals and objectives.
    1. PFA is a useful management tool for determining factors that are contributing to long client waiting times, overburdened and unhappy staff, and client and paperwork flow.
    2. PFA is not useful in the evaluation of individual personnel performance.
  - Must commit to the process of change, including time and resources.
  - Assure staff is aware of this commitment to the process of change and long range clinic improvement for the benefit of both the clients and staff.

- *PFA Team*: The formation of an interdisciplinary team composed of individuals from the key clinic operational areas will facilitate involvement in the study and the decision-making process. In County Health Departments this team might include at a minimum the Administrative Director, the District Nurse Manager, the Coordinating Nurse, the APO or Adm. Asst. or key clerical staff. Consideration should be given to including other nursing or clinical staff, the APN and/or physician, the Regional Records Consultants, or other individuals critical to the process in a particular location.

  This team is responsible for all aspects of the PFA process from study design to data analysis, including the identification of obstacles to the provision of client services. They will also be important in the development of feasible options and in the implementation needed to make appropriate changes.

  These team members should be individuals that have organizational skills, knowledge of clinic function, and the respect of their peers. Representation of all levels of the organization is important to the ultimate success.

Preparing for the PFA Study

This section outlines the steps for conducting a PFA study in County Health Departments.

Defining and Coding the Study Variables:

The OSDH staff has defined the variables for the pilot and for use in PFA studies conducted for statewide planning. This consistency allows for comparisons over periods of time and for analyses across multiple studies. County specific variables can be added to meet needs unique to a County Health Department.

Counties choosing to conduct independent PFA studies may determine unique sets of variables depending on type of clinic to be assessed or for factors unique to the county being studied, but should consider maintaining standards sets of variables for use in subsequent studies at that location for comparability over time. The PFA Study Coordinator and the PFA Team should jointly determine the variables for locally defined studies. The specific areas of the study to address are the tasks conducted by staff, the Reasons for Visit, and the Sub-classifications. The process of reviewing and selecting the variables provides for communication regarding clinic operations thus enhancing understanding and teambuilding between departments.

The current OSDH Community Health Department list of variables and codes is included in Appendix A. The CDC Manuals and software include other suggested lists of variables that have been found to be most useful in previous studies. Assistance with this step is available from the OSDH staff.

Planning

The following decisions are required before initiating the collection of data:

- When and how will clients be entered on the sign-in sheet?
- Who will distribute the Client Registers?
- How will the Client Registers be routed through the clinic?
- Which staff persons will determine the Reason for Visit and Sub-classification?
- When will staff persons receive their Personnel Registers?
- How will the Client and Personnel Registers be collected?
- What method of synchronizing time will be used?
- What other information should be collected specific to the study?

Each of these questions is discussed more fully in Appendix B: Planning PFA Study

Briefing the Staff

It is recommended that staff be provided information on the plans to conduct a PFA study in advance of the date of the study. This may be done at routine staff meetings or in a special meeting for this purpose. All staff that will be impacted by the PFA should be included in this meeting. The County Health Department Administrator should emphasize that the purpose of the PFA is to improve clinic efficiency and not to evaluate individual staff performance. The Study Coordinator should be prepared to answer questions about the study and the process. It is important that this person demonstrate knowledge and competency to gain the staff's trust.

Remember it is important for the Study Coordinator to be neutral and should not get pulled into disputes between staff or departments that might surface during this process.

The Briefing Session should be an informational session. Identification of problems and developing solutions should be done during Analysis Sessions following the PFA.

Registers and Forms

The OSDH PFA Study design uses two registers to collect information about a clinic session. The OSDH PHOCIS System allows clinics to simply print reports that provide some information that must be collected in other types of clinics. The OSDH staff has supplied the templates for the required registers in Appendix C: Forms. These forms are required for all state generated PFA studies. Counties choosing to make significant changes to the study design for county specific PFA studies may receive assistance from this office to make the necessary changes.

Registers included in Appendix C: Forms:

- Client Sign-In Sheet
- Personnel Register
- Client Register
- Staff ID List

Other Documents: the following documents and reports should be submitted with the PFA and are necessary for appropriate data entry for the study.

- Personnel List with salary information for County being studied (will be available from County Administrator or CHS Director of Finance)
- Clinic Appointment Roster by Date at beginning and end of designated clinic to be studied (Print from PHOCIS)
- Master Schedule Report and Attended Appointment Summary for clinic studied (Print from PHOCIS)

Some codes are included in the software as default variables. In most cases these codes relate to computing cost data. This is an optional set of data. Further information related to this area is available in the CDC Manuals and from the CHS Evaluation and Quality Improvement Service.

Samples of the listed completed Registers are included in Appendix D.

Collecting and Editing Data

Final Briefing:

Ideally within 24 hours of the PFA study a second briefing will be conducted to instruct the staff of how the study will run. Sample registers are available in Appendix D to assist in this briefing. If this briefing is conducted immediately before the clinic being studied, Personnel and Client Registers may be distributed at that time. The Study Coordinator should answer any questions about the process during this session and be sure staff know who to contact if questions arise during the clinic session.

Clinic Data Collection:

Data should be collected in accordance with the identified plan and will be collected by the Study Coordinator or designated individuals throughout the session.

Editing Data

Since County Health Department staffing and clinic layout varies considerably from county to county the PFA study design allows for each staff member to perform a variety of tasks during the same client contact. The actual coding of these activities may require the individual doing data entry to make some adjustments to the Staff ID at the time of data entry in order to collect the data in a standard fashion. The newer versions of the WinPFA program have improved capabilities in this area and allow more flexibility in data entry. For state requested PFA studies this coding will be completed at the state office. For county defined studies if is recommended that the Study Coordinator identify the need to complete this step based on the study design and after consultation with the OSDH staff.

The Study Coordinator should visually check completed registers for legibility, accuracy, and completeness. This will allow corrections to be made while events are still fresh in the minds of staff.

General Hints for visual editing:

- All required fields are completed
- All data is clear and legible
- Time may in military time, but is not required
- Personnel Registers
  - Time in and out information completed on all forms
  - Staff ID code matches that on Staff ID Code List
- Client Sign-In Sheet is attached to the Client Register, if used in the study
- Client Registers
  - For all contacts with clients there should be a Staff ID Code, Task (code or description), Time-In, and Time-Out
  - Task—code or description used should relate to those identified on the Task List provided
  - Successive contacts should have start times in chronological order and that end times are no earlier than the task start time.

Common Errors:

- Missing or Incorrect Break Times (Personnel Register)
- Missing Time of Arrival or Time of Appointment (Client Register)
- Time of Arrival later than first contact Start Time (Client Register)
- Missing Client or Staff ID code

Appendices

- **A—Code List**
- **B—Planning PFA Study**
- **C—Forms and Registers**
- **D—Sample Registers**

Appendix A—Code List

Oklahoma State Department of Health
Patient Flow Analysis

Code Lists

County: Date:

The following information should be used to complete information on Client Registers.

List of Tasks and Task Codes: **May use either Code or Description on Client Register**

Clinic Task--Alphabetical		
Code	**Description**	**Definitions/Examples**
A	**Anthropometrics**	Height, Weight, BP (any one or all)
B	**Check in**	Demographics, Medicaid Eligibility, Check income or residence, Voter Registration, etc.
C	**Check out**	Scheduling next appointment, billing, collections
E	**Exam**	Initial or Annual, Problem (Usually APN or Physician)
F	**Food Instruments**	Issue Food Instruments
H	**History**	Intake, Education, Pre-counseling
I	**Immunizations**	Indicate number of antigens, PPD test or Reading
L	**Lab**	Collection of Specimens or performing test
M	**Data Entry**	Charting, Preparing Lab Slips, etc.
N	**Nutrition**	Counseling, WIC Cert/Recert, Nutrition Ed, etc.
O	**Other**	County specific
P	**Post-Counseling**	Women's Health, referrals, establish next appt, billing and collection info (professional), counseling after positive pregnancy test
R	**Restricted Services**	Early Start, Pregnancy Test, Supply Pickup, EC, STD, Adult Health Service or Chronic Disease, etc. (Usually RN or LPN)
S	**Social Services**	Social Work, referrals (more complex), etc.
Shading indicated codes most often used by administrative/clerical staff		
Non-Contact—Used by all staff		
	Filing	Filing
	Client Call	Client phone contact
	Documentation	Chart documentation without client present
	Clinic Business	Ordering supplies, pap follow-up, STD follow-up, TB follow-up, log reconciliation, other clinic business with no client present
	Other	Specify on Personnel Register
Unavailable--- Used by all staff		
	Break	Regular break or personal business that is 15 minutes or more
	Lunch	Meal break
	Out of Clinic	Assigned duties outside of clinic—such as home visit, community presentation, etc. (only use if interrupts clinic availability)

Client ID Number: to be determined from Client Sign In Sheet—
(Numeric code of not more than 3 characters)

Reason For Visit: To be determined by Front Desk

Reason For Visit (PHOCIS)—Program	
Program	**Description**
Adolescent Health	Established Adolescent Health Clinics
Adult Services	Appoints not under specific program guidelines, such as Breast and Cervical Cancer Screening outside of FP or Take Charge Programs, non-WIC Nutrition Counseling, etc.
Child Health	Established Child Health Clinics, or services such as Anemia follow-up of WIC Client, etc.
Chronic Disease	Chronic Disease related services
Communicable Disease	Communicable Disease Prevention Services, such as head lice check, rash check, general communicable disease
Dental	Established Dental Clinic Services
Dysplasia	Regional Dysplasia Clinic Services
Family Planning	Family Planning Clinic Services
General	Other non-defined, might include Social Work, etc.
Immunizations	Immunizations—when used should specify # of antigens given
Maternity	Maternity Clinic Services
STD	When STD is Primary Reason for Clinic Visit
Guidance	Guidance
Tuberculosis	TB Screening, Diagnosis, and Treatment Services
WIC	WIC Program Services

Appointment Type--Definitions	
Type	**Description**
Annual/Initial	First Visit or More Complex Visit for Program Service
Return	Subsequent Visit, less complex
Follow-up	Problem follow-up (such as FP Method, Re-pap, Hgb Check, Positive Pregnancy Test, etc.
Limited	Negative Pregnancy Test, lice head check, etc.
WIC Cert/Recert	WIC Program Certification or Recertification
WIC Nut Ed	WIC Nutrition Education—all categories—individual only
WIC Food Instrument Pickup	WIC Food Instrument Pick-up Only
Other 1	County Defined

Appendix B—Planning PFA Study

Planning PFA Study

1. **When and how will clients be entered on the sign-in sheet?**
   It is extremely important to determine when and how clients will enter the study. This is the point at which a client number is assigned and will be used to determine initial client waiting times. A suggested form Client Sign-In is included in Appendix C: Forms. This form would be distributed as the client enters the health department by a method to be determined by the Study Coordinator and the PFA Team. The use of this form is only necessary if clients do not immediately receive service at the reception desk upon entering the health department and must wait to be called. The specific procedure may be adjusted based on procedures already in place in a specific location. The primary considerations are to capture the time the client actually enters the health department, the time waiting to be seen at the first station (reception), and the assignment of a study number.

   Note: a person not assigned to work the clinic may be needed to facilitate the collection of this information for the study.

2. **Who will distribute the Client Registers?**
   The Client Registers will be attached to the front of the client chart/record by the clerical staff at time of first contact. This individual will complete the top section and, if used, the Client Sign-In Sheet will be stapled to the back of this form.

   Consideration should be given to specific County Health Department logistics. If the site has multiple entries or check-in points for service to be included in a specific study, then alternative plans may be required for the distribution of Client Registers.

3. **How will the Client Registers be routed through the clinic?**
   In most instances attaching the Client Register to the client's chart is the most reliable method of routing. If there are some stations or services that would not be captured in this manner alternatives should be discussed. One such option would be to have the client carry the form with them and present at each station for documentation.

4. **Which staff persons will determine the Reason for Visit and Sub-classification?**
   For County Health Department PFA studies the clerical person initiating the Client Register at first contact will determine the Reason for Visit. The Reason for Visit is the intended service for this client based on the PHOCIS Program Category (see Code List—in Appendix A). State initiated studies will require use of the defined code list. Counties doing locally defined studies may change this list to meet specific needs in that location. Assistance is available from the CHS Evaluation and Quality Improvement Service to make these changes in data collection tools and software use.

   In some instances, clients receive services that are different from the reason indicated in the appointment schedule. An example might be a client scheduled for Family Planning that actually receives STD services, or a WIC client that also receives Immunizations. If this is a frequent occurrence in a particular study, the Study Coordinator may choose to review study data collection documents and actually determine the Reason for Visit based on services received and proceed with data entry based on this classification.

The OSDH staff has determined Sub-Classifications for statewide studies. Sub-Classifications are questions to be answered at initial intake as listed on the Client Register and include the following:

- *Appointment Type*: Options include Annual/Initial, Return, Follow-up, Limited, WIC Cert/Recert, WIC Nut Ed, WIC Food Instrument Pickup, Other 1, and Other 2—Only one option should be marked in response to this category. (See Appointment Type definitions on the Code List in Appendix A)
- *Scheduled/Walk-In*: Mark either Scheduled Appointment and denote time from PHOCIS Daily Appointment Roster or Walk-In
- *Non-English Speaking*: Indicate Yes or No
- *Client's Age:* Indicate age in years or months

5. When will staff persons receive their Personnel Registers?

Personnel Registers will usually be distributed on the day of the study to avoid being misplaced. The Study Coordinator will determine the best option for each location.

6. How will the Client and Personnel Registers be collected?

Client Registers stay with the client's record until collected at the end of the clinic session or by the Study Coordinator during the session. The collection of these registers during the clinic will facilitate a brief review of the Register to assure legibility of entries or missing information while appropriate individuals are still available to fix identified problems. This collection throughout the day also decreases the chance of misplacing forms.

Personnel Registers should be returned to a designated contact or picked up by the Study Coordinator at the end of the clinic session being studied. If individuals do not work the entire clinic time then forms should be returned at the end of the designated period worked in this the clinic being studied.

The Study Coordinator or designee may desire to review Client Registers in comparison to client records to verify that services documented on PFA Forms with the services received and documented in the client record.

7. What method of synchronizing time will be used?

The Study Coordinator should determine the best option to assure accurate documentation of time for the study. Even small variations in time can create inaccuracies in reporting that can impact the results of the study. The following should be considered when determining the method for synchronizing time.

- Use times displayed on computer or telephone equipment if individuals will have access to these at the points of contact being recorded in the study.
- Determine a "master clock" and have all staff synchronize their personal timepieces when they receive their Personnel Registers for the study.
- Digital timepieces are more accurate and should be used when available.

8. What other information should be collected specific to the study?

The Study Coordinator is responsible to assure that the following documents are available and submitted with the Client and Personnel Registers for data entry:

- Personnel List with salary information for County being studied (will be available from County Administrator or CHS Director of Finance)
- Staff ID List for Clinic Staff on date of study
- Clinic Appointment Roster by Date at beginning and end of designated clinic to be studied (Print from PHOCIS)
- Master Schedule Report and Attended Appointment Summary for clinic studied (Print from PHOCIS)

The Study Coordinator should also make notes of factors noted during the clinic session that may have impacted the services on this date that would not be noted in data collected. This will assist in the analyses of the results and provide insight into future comparisons and study design. Factors that are different on this date from routine clinics of this type should be indicated and included in a brief summary with the PFA materials.

Outside observers included in a specific PFA study should also record notes about observations and submit a summary of information to be included in the final report of the study.

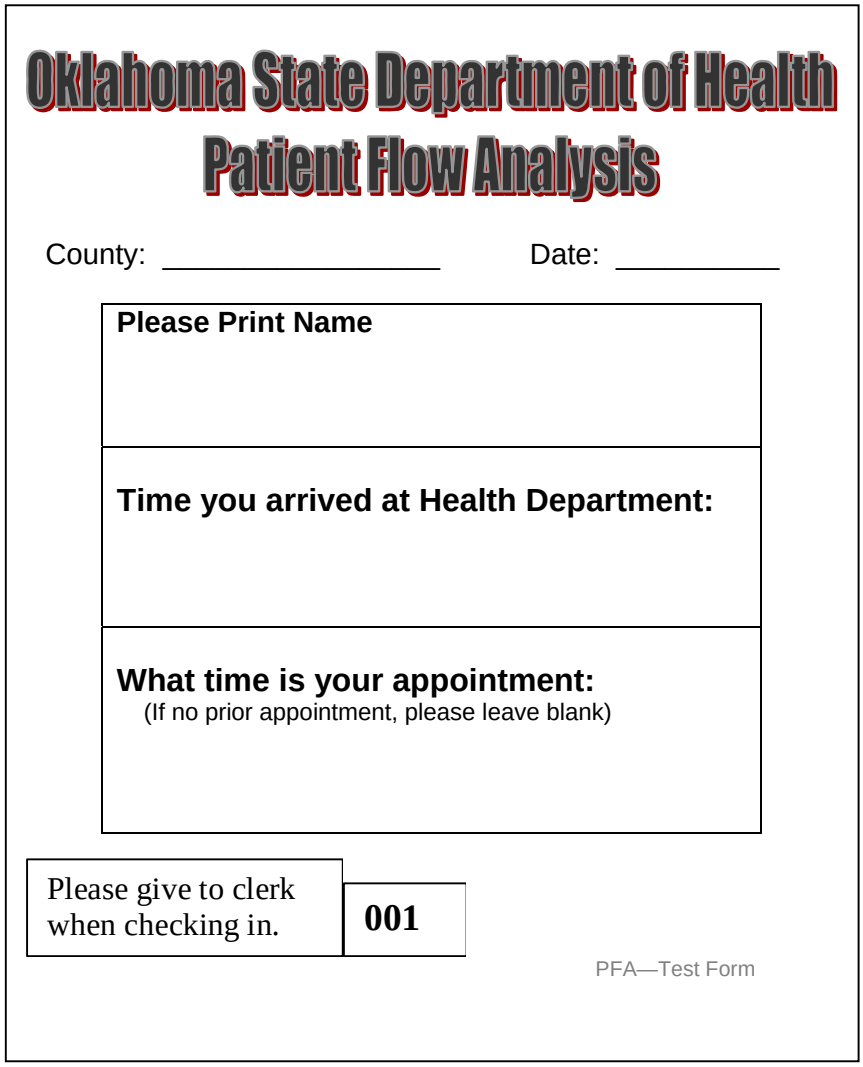
Appendix C—Forms and Registers

All Forms and Registers are available on OSDH Public Folders or from the OSDH staff

Client Sign-In Sheet

Please request electronic file from CHS Evaluation and Quality Improvement Service or go to OSDH Microsoft Outlook Public Folders to obtain copy of form

Sample Form Only



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County: _____ Date: _____

Please Print Name
Time you arrived at Health Department:
What time is your appointment: (If no prior appointment, please leave blank)

Please give to clerk when checking in. **001**

PFA—Test Form

Oklahoma State Department of Health
Patient Flow Analysis

Personnel Register

County: _____ Date: _____

Name: _____ Title: _____

Staff ID: (text-2 characters) ☐☐ --(see list supplied)

(Data Entry Only—may designate 2 additional identifiers for each task performed by single staff member)

Time you are ready to serve clients…… HR ☐☐ MIN ☐☐

Time you are no longer available to serve clients…… HR ☐☐ MIN ☐☐

Travel to work in this clinic:

Miles Traveled (round trip)…… ☐☐☐

Mileage Rate (cents/mile)…… ☐☐☐

Time in Travel Status (minutes)…… ☐☐☐

Other: Student ☐ Yes New Employee: ☐ Yes (less than 6 mo)

Unavailable/Non-Contact Time

(Examples: Break or Personal Business, Lunch, Client Call, Duties outside this clinic, etc)

Reason Unavailable	Start Time	End Time

Attach additional sheets if necessary.

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Patient Flow Analysis

Client Register

County: _____ Date: _____

Client ID Number: (See sign in sheet)..... ☐☐☐

Reason for Visit--(Program--PHOCIS)—See list)..... ☐

Appointment Type: (Mark only one) ☐ **Annual/Initial** ☐ **Return** ☐ **Follow-up/Limited**
☐ **WIC Cert/Recert** ☐ **WIC Nut Ed** ☐ **WIC Food Instrument Pickup** ☐ **Other** _____

Scheduled/Walk-In: (Mark only one) ☐ **Scheduled Appointment: Appt Time:** HR ☐☐ MIN ☐☐
☐ **Walk-In**

Non-English Speaking: ☐ **Yes** ☐ **No** **Client's Age:** ☐

Time of Arrival..... HR ☐☐ MIN ☐☐

Time of Departure..... ☐☐ : ☐☐

Client Service Contacts—See List of Tasks and Task Codes

#	Staff ID	Task (code or description) (If Immunization—indicate # antigens given)	Start Time	End Time
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

Continue as needed on reverse

Client Service Contacts—continued from front Client Register

#	Staff ID	Task (code or description) (If Immunization—indicate # antigens given)	Start Time	End Time
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				
32				
33				
Client Unavailable or Non-Contact				
	Reason Unavailable: specify (examples—view video, personal time, etc.)		**Start Time**	**End Time**
1				
2				
3				

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Staff ID List

County: ______________________________ Date: ________________________

Each staff member involved in the clinic has been assigned a specific code to be used when documenting activities on either the personnel or client registers. The code is 2 characters. You will use this code throughout this study.

At the time of data entry additional characters may be added to your specific code if you perform more than one primary task in this clinic. This will allow for more appropriate evaluation of clinic flow on this date. Detailed information will be provided when the reports are submitted.

Employee Id	LNAME	FNAME	MI	Classification

Add any other staff that were not identified prior to the clinic and assign staff code.

Employee Id	LNAME	FNAME	MI	Classification

Appendix D—Sample Registers

All Sample Registers are available on OSDH Public Folders or from the CHS Evaluation and Quality Improvement Service

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Please write clearly and legibly

Personnel Register

County: Pottawatomie Date: Nov 15, 2005

Name: Nancy Nurse Title: ARNP

Staff ID: (text-2 characters) --(see list supplied)

In most cases, 1st and last initial

(Data Entry Only—may designate 2 additional identifiers for each task performed by single staff member)

Time you are ready to serve clients…….. :

Time you are no longer available to serve clients…….. :

Travel to work in this clinic:

Miles Traveled (round trip)……..

Mileage Rate (cents/mile)……..

Time in Travel Status (minutes)…….

Other: Student ☐ Yes New Employee: ☒ Yes (less than 6 mo)

Unavailable/Non-Contact Time
(Examples: Break or Personal Business, Lunch, Client Call, Duties outside this clinic, etc)

Only if 15 minutes or more

Reason Unavailable	Start Time	End Time
Break	3:10	3:25
TC-client problem	4:15	4:21

Time serving clients is recorded on client registers

Attach additional sheets if necessary.

Please write clearly and legibly

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Staple client sign-in sheet to this form.

Client Register

To be completed by Adm/clerical staff—Attach to client chart

County: Pottawatomie County Date: Nov. 15, 2005

Client ID Number: (See sign in sheet)..... 0 0 1

Reason for Visit--(Program--PHOCIS)—See list)..... WIC

Appointment Type: (Mark only one) ☐ Annual/Initial ☐ Return ☐ Follow-up/Limited
☒ WIC Cert/Recert ☐ WIC Nut Ed ☐ WIC Food Instrument Pickup ☐ Other 1 ☐ Other 2

Scheduled/Walk-In: (Mark only one) ☒ Scheduled Appointment: Appt Time: HR 0 1 MIN 0 0
☐ Walk-In

Non-English Speaking: ☐ Yes ☒ No **Client's Age:** 23 years

Time of Arrival..... From Sign-In Form ..... HR 1 2 MIN 4 8

May use military time

Time of Departure..... At final checkout ..... 0 1 : 5 6

Client Service Contacts—See List of Tasks and Task Codes

Each staff member to complete for each different task

Should relate to code list, might be important if more than 1 staff person involved.

#	Staff ID	Task (code or description) (If Immunization—indicate # antigens given)	Start Time	End Time
1	AA	C or Clerical—could say demographics & income verification, etc.	12:55	12:59
2	BB	C—voter registration	1:00	1:05
3	CC	A—Ht, Wt	1:20	1:25
4	CC	L—Hgb	1:25	1:30
5	CC	H—History	1:30	1:40
6	DD	N--Cert-prenatal	1:41	1:45
7	EE	B—issue FI—schedule NE	1:52	1:56
8				
9				
10				

Same Staff Person—Different Tasks

Client Service Contacts—continued from front Client Register

#	Staff ID	Task (code or description) (If Immunization—indicate # antigens given)	Start Time	End Time
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				
32				
33				
Client Unavailable or Non-Contact				
	Reason Unavailable: specify (examples—view video, personal time, etc.)		**Start Time**	**End Time**
1	**WIC Participation--New Client Video**		**1:10**	**1:15**
2				
3				

Optional Module: Using the Data

The data collected must be entered into the WinPFA software developed by the CDC (available for download from CDC Website). The software generates specific reports that have been useful for analysis and interpretation of the results of the PFA study. The Study Coordinator and the PFA Study Team must process this information to reach the ultimate goals of improved clinic efficiency and client satisfaction. This area will be explored further in the training and technical assistance provided by the CHS Evaluation and Quality Improvement Service.

Data Entry:
OSDH staff will complete the data entry for pilot studies and state initiated studies. Training will be provided to assist counties in the implementation of county specific studies and the use of PFA software and data entry.

Output and Interpretation:

- Statistical Reports
  - Preliminary Analysis Report—examples of information that may be ascertained from the PFA Reports
    - Number of clients served
    - Clients classified by reason for visit and Sub-Classifications
    - Average (arithmetic mean) length of clinic visit for all clients
    - Average amount of time spent receiving services
    - Time spent in clinic and receiving services by reason for visit
    - Average amount of time spent receiving each service (based on tasks)
    - Time spent receiving each service by reason for visit
    - Average waiting time
    - Numbers of clients on-time, early, or late for appointments
    - Client contact of longest duration (by task)
  - Reports available in PFA Software
    - Summary Report
    - Report 1—Clients' Compliance with Appointments—(will require definition of on-time at time of data entry—PFA Studies should use 15 minutes)
      - Clients Time of Arrival Relative to Appointment Time
      - Number of Clients with and without appointment by Reason for Visit
    - Report 2—Clients' Time in Clinic: Contacts and Non-Contacts, by Reason for Visit and Sub-Classification
      - Clients Total Time in Clinic by Reason for Visit (& by Sub-Class)
      - Clients Contact Time in Clinic by Reason for Visit (& by Sub-Class)
    - Report 3—Client Waiting Time Between Contacts, Non-Contacts, by Task and by Designation
      - Client Waiting Time Between Service Events (Contacts) by Task
      - Client Waiting Time Between Service Events (Contacts & Client Non-Contacts) by Task
      - Client Waiting Time Between Service Events (Contacts and Staff Non-Contacts) by Task
      - Client Waiting Time Between Service Events (Contacts and Client/Staff Non-Contacts) by Task
      - Client Waiting Time Between Service Events (Contacts) by Designation
    - Report 4—Personnel Statistics: Time Available and Service Time, by Task and by Designation
      - Staff Statistics By Task
      - Staff Statistics By Official Designation
    - Report 5—Personnel Time by Client Served by Task

    - Service Minutes by Task (excludes cost calculations)
- Report 6—Personnel Time by Client Served by Reason for Visit (RFV) and Sub-Classification (SUB)
    - Client Service Minutes (Contact, Non Contact) by Reason for Visit
    - Client Service Minutes (Contact, Non Contact) by Sub-Classification
    - Client Service Minutes (Contact, Non Contact) by Reason for Visit & Sub-Class
- Report 7—Personnel Costs by Client Served by Reason for Visit (RSV) and Sub-Classification and by Task
    - Includes cost calculations, if used in study
- Report 8—Individual Staff Data—(must designate if desire to have each staff member's rate displayed in report)
- Report 9—Clients per Hour by Staff Member and by Designation
    - Number of clients
    - Number of staff
    - Number of client and staff events during each time interval
- Report 10—Client Contact Sequence Frequency by Reason for Visit
- Report 11—Reports on Used Defined Fields

o Graphs: PFA Software also will provide a graphic representation of the data. Related to client services received and staff services provided against a time scale for the clinic session studied. The current Beta version of the WinPFA program does not allow these graphs to be printed.

Detailed information related to the design of the software and specific calculations are available in the Patient Flow Analysis for Windows: WinPFA Data Entry Manual and from the CDC Division of Reproductive Health.

Interpretation and Use of WinPFA Reports

A manual for Interpretation and Use of WinPFA Reports Manual is currently in draft format and will be available soon from CDC. The new manual provides detailed information on factors used to develop each report with samples of the indicated items.

An adaptation of the "Issues Addressed by These Data" from the CDC draft manual is presented in the following section. These questions will assist County Health Department personnel in the interpretation of the reports.

Report 1—Clients Compliance with Appointments

- How effective are the clinic's attempts to educate clients regarding appointment compliance?
- Does this "show rate" agree with historic rates for your clinic?
- How well is your appointment reminder system working?
- Do some reasons for visit categories surprisingly tend to be walk-ins?
- Does "early" or "very early" arrival on the part of some clients negatively affect the flow of "on-time" clients?
- How do clinics with appointments differ from those with no appointment system?
- Are wait times affected by the appointment scheduling system (or lack thereof) used in the county?
- Is the show rate identified in the PFA Study comparable to that reflected by the PHOCIS data?

Report 2—Clients Visits: Total Visit Time, Duration of Contacts and Non-Contacts, by Reason for Visit and by Sub-classification

- How accurately were the clinic management and staff able to quantify each reason for visit and sub-classification "service time percent"? or Was waiting time an issue?
- Do the "means" and "medians" generally agree? If not, be cautious that data for few clients may be skewing the data.
- Do some reasons for visits and sub-classifications proportionally receive more service than other reasons for visits and other sub-classifications? Are the differences predicted by the clinic protocol?
- Do some reasons for visits and sub-classifications proportionally spend more time waiting than other reasons for visits or other sub-classifications? How can such waiting periods be filled to benefit the clients and the clinic?
- How much time should the appointment system allot for each reason for visit appointment slot?
- Does the practice of having "walk-in" general clinic concurrent with appointed clinics impact the service for those with appointments? Are reasons for visits or sub-classifications a factor in this impact?

Report 3—Waiting Time Between Service Events

- Which stops are bottlenecked?
- Based on the gross waiting per service event and number of such events, which bottlenecked stops are highest priority for remedying the associated waiting time?
- Might some reasons for visits be more affected by the bottlenecks than other reasons for visits? (Refer to Report 10 for client flow by reasons for visits)

- In formulating a waiting time reduction plan, should staff or client non-contacts be included in calculation of waiting time?
- Are clients that "walk-in" for service impacting the wait times of clients overall?
- Is there a significant difference between client wait times between services for clients with appointments and those that "walk-in" for services?

Report 4—Personnel Statistics: A Comparison of Time Available, Time Delivering Contact, and Non-Contact Services, by Task and by Official Designation

- Did staff schedules correctly anticipate the amount of time to deliver the full range of services for this clinic session?
- Was the percent of each staff's available time for each service what staff and management expected?
- How was the responsibility for delivering non-contact services distributed among the staff?
- Does the amount of time staff spends on "Not in Session Non Contact Services" suggest the need for any staffing or staff scheduling changes?
- To what extent does the staff deliver multiple services?
  - Are staff cross-trained?
  - Are cross-trained staff being used to fill areas when needed?
- Is the clinic's existing staffing capacity being exceeded? Useful for designing temporary clinic sessions or for considering expanding clinic operations by adding clients or services.

Report 5—Personnel Time per Client Served by Task

- Does the range of service events described agree with what the clinic protocol predicts?
  - Did the clinic fail to provide some required services?
- Does the range in duration of service events agree with what the clinic protocol predicts?
- Do any clients fail to receive services mandated by the clinic protocol?
- Do the "means" and "medians" generally agree? If not, be cautious that data for a few clients may be skewing the data.

Report 6—Aggregate Client Service Time According to Reasons for Visits and Sub-classification by Task

- Do the "means" and "medians" generally agree? If not, be cautious that data for a few clients may be skewing the data.
- Does the range of duration of some service events for some reasons for visits or some sub-classifications agree with what the clinic protocol anticipates?
- Do clients in any of the reasons for visits or sub-classifications fail to receive services indicated by the clinic protocol?
- Do the data from the PHOCIS appointment system agree with these data? Review the average amount of service time for each of the reasons for visits and compare to the established schedule within PHOCIS.

Report 7—Client Service Costs Per Service Event by Reasons for Visits and by Sub-classifications

- Per their costs, are some reasons for visits or some sub-classifications surprisingly expensive or surprisingly inexpensive?

- Does the billing for all reasons for visits and all sub-classifications recover these costs, where applicable?
- Do all reasons for visits and sub-classifications receive the expected range of services? Are there any stops missed?
- Can combining some services result in reduced costs?
- Would attributing some or all staff as – distributed present a more useful picture of these cost data?
- Do the cost values in PHOCIS and PFA reflect the same value?

Report 8—Individual Staff Data: Rate, Designation, Service Events and Time Available

- Do the "means" and "medians" generally agree? If not, be cautious that data for a few clients may be skewing the data.
- Do staff spend their workday as scheduled (or projected) by the clinic management?
- Do staff deliver any services for which they are not qualified?
- Do any staff appear to be burdened by the need to deliver some services?
- Do any staff spend "too much" time delivering services to "Unknown Non-Contacts"?
- What does the amount of "Non-Reported Time" suggest about future PFA studies?
- Do higher paid staff spend their workday in an economically efficient manner?
- "Non-Reported time" may help define the extent to which your PFA study accounted for the entire of the staff's workday.
- Are there service events that could be performed by other staff that are more available or of less cost? Example: RN providing Post-Counseling instead of the ARNP or physician.
- Are staff overlapping or repeating duties? Examples include client history, patient education, etc.
- Are services reported in PHOCIS Encounter Reports Comparable to the reports from the PFA?

Report 9—Clinic Productivity Indices: Average Number of Services Per Hour for Each Staff and Number of Clients Receiving Service and Number of Staff Providing Services During User-Defined Clinic Time Intervals

- Does the "production index" (Service events per hour) vary from study to study?
- Are staff sufficiently cross-trained to allow staff to provide the same service as other staff?
- What are the busiest and least busy hours of operation?
- Given the amount of business conducted and the number of staff and clients present before and after the published hours, do the published hours need re-evaluation?
- Given the number of clients in clinic before published hours, is sufficient staff available to provide normal routine service?
- Is there an indication that clinic hours should be changed to reflect utilization patterns established by clients? Or in "walk-in" clinics?

Report 10—Clinic Flow by Reasons for Visits

- Does the clinic protocol predict the range of services listed for each reason for visit category?
- How similar are flows across the reasons for visits?
- What may account for variation among each reason for visit category flow types? Client history or physical exam indicating the need for additional services? Client request for service such as HIV counseling? Other?

- If any reason for visit category shows only one flow, are the only differences among clients with this reason for visit duration of the services and who provides the service? Or, are there other important distinctions the study is not documenting? For example, are all contacts and non-contacts appropriately labeled?
- Is there a difference in clinic flow between the clients seen with scheduled appointments and those who "walk-in"?

Report 11—Reports on User Defined Fields

User Defined Fields in Oklahoma include the designation between scheduled appointments and "walk-in" appointments; identification of non-English speaking clients; and the client's age in months. Each variable is presented independently and the WinPFA program does not have the capacity to analyze the data with any other study variable. The data supplied will provide cumulative data regarding the overall client to assist the Study Coordinator and the Clinic Manager in characterizing the clinic session being studied.

Summary of Oklahoma Studies:

As PFA studies are conducted across the state, data will be collected and analyzed to identify common factors that will assist with establishing standards and capacity planning. Reports will be developed by the OSDH staff and submitted to Community Health Services leadership for review.

Resources

[3] Centers for Disease Control and Prevention. Patient Flow Analysis Data Collection Manual. Atlanta, GA. Downloaded from www.cdc.gov, September 10,2005.

[3] Centers for Disease Control and Prevention. Patient Flow Analysis for Windows: WinPFA Data Entry Manual. Atlanta, GA. Downloaded from http://www.cdc.gov, September 10, 2005.

[3] Centers for Disease Control and Prevention. Interpretation and Use of the WinPFA Reports. Draft document obtained from William Boyd, Division of Reproductive Health Project Officer, November 2005.