Process Analysis Results and Recommendations

Improving M-Works Front Desk Operations

University of Michigan Occupational Health Center

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EXECUTIVE SUMMARY

PROJECT DEFINITION AND SCOPE

The purpose of this project was to analyze the front desk processes performed at M-Works Clinic and other problems that were observed during visits to clinic, regarding patient privacy or ergonomic issues. The front desk staff is required to perform various duties involving entering computer data, answering telephones, copying and faxing paperwork, and scheduling appointments. This creates a burden for the staff and results in personal fatigue or errors. The project objectives are listed as follows:

- Improve processes at front desk.
- Improve communication between M-Works staff.
- Improve efficiency and reduce error in front desk procedures.

The scope of the project included 3 phases. The Introduction phase required our team to obtain a general understanding of M-Works front desk procedures and determine specific problems to analyze. After that stage was completed, the team began the Observatory phase by visiting the clinic and observing the primary problems. Also, the necessary tools to analyze the problems were determined. In the Completion phase, IOE course concepts related to works sampling, process analysis, work organization, and ergonomics were applied. In this stage, the results were analyzed and recommendations were determined.

RESULTS

The results listed below were obtained from our methodology analysis. For summary of the appointment log data, see Appendix H, Weekly Clinic Schedule Data.

The weekly phone profile report for October shows:

- 43% of total incoming calls are appointments
- Approximately 1400 appointment calls are received a month
- 10% of appointment calls are abandoned

A student report on Clinic Register Use in Same Day Arrivals from April 2000 shows:

- 46% of clinics cross-check billing form with register
- 69% of clinics highlight information
- 5 copies/day of clinic schedule are made
The appointment logs from October 2nd to October 6th show:

- Scheduled visits
  - 37% work injury
  - 20% physical therapy
  - 26% medical surveillance
  - 17% drug screen

- Walk-in visits
  - 11% work injury
  - 6% medical surveillance
  - 83% drug screen

RECOMMENDATIONS

The following recommendations will help M-Works improve the front desk processes.

- **Implement email address**
  
  Employees and patients only schedule appointments over the telephone and in person. It is recommended that appointments be scheduled through email. M-Works should create a new user group on Groupwise, so all front desk employees can access email. The email address would be mworks@med.umich.edu. Each staff member would be required to check email when they arrived at a certain rotation. M-Works should inform all employers and patients that appointment scheduling is preferred via email. This will help reduce the amount of phone calls received.

- **Install Intranet site**
  
  The staff uses many forms that often lack a need for replication. To ameliorate the issue of excess copying and faxing, it is recommended that M-Works digitize their paperwork to decrease the demands on employees. This can be performed by creating a website that would centralize all of M-Works common files and consolidate for easy access and retrieval. As opposed to making copies and faxing the information to outside units, M-Works could give each organization that it works with a special password for use or access the website. Specific information regarding their account with M-Works would be posted to the website, and concerns would be communicated through an email client attached to the website. Also, the amount of copies made during the end of day procedures should be reduced.

- **Implement Call Center and hire part-time staff**
  
  To allow front desk staff to focus on administrative duties, it is recommended that computer consoles be installed outside of the front desk to allow ease of check-in for patients. These units
will be optional for those clients who are proficient in the use of the computer. The consoles would give the patient a choice of why they are coming into M-Works, and allow them to digitally completely the required paperwork and immediately email it to the staff who will prepare their files as soon as they receive the email and notify the doctor that they have arrive. A second recommendation is to make the front desk staff cross-functional in nature. A third recommendation to decrease the total responsibility of each front desk employee would be to institute a dedicated call center to handle any phone related issues and concerns. Finally, it is recommended that part-time staff is hired to cover the front desk during lunch hours.

- *Install closed drug-screening bin*

When drug-screening patients check out, their records are placed inside a folder in an open bin located on the check-out desk, so the MA’s and front desk staff can readily access the record. However, the bin is visible to other patients checking out. It is recommended that the drug-screening records be placed in a closed bin that is not located in an area where patients can access the records.
INTRODUCTION AND METHODOLOGY

PURPOSE

The M-Works Ann Arbor Clinic is involved in evaluating and flowcharting the front desk functions to improve processes, redistribute workload, and reduce work and frustration of front desk staff. La Vaughn Palma-Davis, M-Works Administrator and Project Director, requested the project. The M-Works staff, Project Coordinator, and Student team are responsible for completing the project. The Project Director asked the student team to carefully analyze and recommend improvements for several problems.

Primary problems at M-Works front desk that our team analyzed:

1. Congested phone lines and lack of understanding of telephone system
2. Unclear work rules and responsibilities
3. Decrease in staff size during the lunch period
4. Excessive copying and faxing of materials
5. Excessive highlighting
6. Patient confidentiality

GOALS AND OBJECTIVES

The student team analyzed several workflows from the current state analysis of the M-Works front desk processes. Our team used the current state analysis to make recommendations for future improvements at M-Works front desk. Also, our team has provided documentation on the sources of front desk inefficiencies. The following processes were examined:

- Phone appointment scheduling
  - Drug screen scheduling
  - Medical surveillance scheduling
  - Other questions
  - Client service questions
  - Automated phone system
- Patient check in
- Patient check out
- End of day procedures

METHODOLOGY

A sequence of methods was used in examining the current analysis.

1. Interviews were performed with front desk staff and observations of daily operations were made. See Appendix A, M-Works Front Desk Tree Diagram. This helped our team acquire knowledge of front desk operations.
2. Our team evaluated the methodology needed for each problem. See Appendix B, *Detailed Methodology Chart*.

3. Based on the daily work activities, a preliminary work sampling form was created and operators were observed at random times. See Appendix F, *Preliminary Work Sampling Forms*. Results were used in selecting the primary problems to study. This can be seen in Appendix G, *Preliminary Work Sampling Data*.

4. The project scope was narrowed by categorizing the problems and reevaluating the methodology needed to study each problem. See Table 1 below.

5. Our team interviewed the front desk staff regarding all process that occurred at the front desk. Then, flowcharts were created. See Appendix, *Current State Workflows*.

6. Data was collected from the appointment logs and phone profile report to determine volumes and frequencies for the flowcharts.

7. Finally, front desk staff answered surveys to help generate ideas for recommendations. See Appendix C, *M-Works Staff Survey*.

8. Our team brainstormed during final clinic visits and developed recommendations to improve the M-Works front desk operations. See Appendix, *Future State Workflows*.

Table 1. Methodology.

<table>
<thead>
<tr>
<th>Key issue</th>
<th>Problem</th>
<th>Methodology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Telephone system</td>
<td>Employees are having difficulty transferring calls because lines are always in use. Numerous phone calls are received for appointments.</td>
<td>Identify the departments that receive the most calls. Determine and reduce average queue time of customer call. Find another way to schedule appointments. Flowchart phone process to identify time spent on phone.</td>
</tr>
<tr>
<td>Paperwork</td>
<td>Employees waste paper faxing and copying. Also, patients are required to fill out a lot of paperwork and front desk must file paperwork.</td>
<td>Determine the total number of faxes and compute the mean for the average number of faxes per week/day. Determine if all paperwork is necessary by documenting how often it is used.</td>
</tr>
<tr>
<td>General office duties</td>
<td>Employees feel burdened and become frustrated with front desk responsibilities.</td>
<td>Determine ways to equally distribute work among front desk staff.</td>
</tr>
<tr>
<td>Patient Privacy</td>
<td>Employees are unaware of ways that may invade patients' privacy.</td>
<td>Observe daily operations. Visit other walk-in clinics.</td>
</tr>
</tbody>
</table>
CURRENT SITUATION OVERVIEW

DEPARTMENT DESCRIPTION

M-Works is a division of the University of Michigan hospital that specializes in occupational health for numerous employers in the Washtenaw County and nearby areas. The M-Works Occupational Health Services focuses on preventing work-related injuries and illnesses. Although the clinic's services are cost-effective and responsive for employers, there are inefficiencies in the front desk procedures.

MAJOR WORKLOAD TYPES

Our team created current state workflows for several processes. This section will discuss in detail the processes with future states: check-in, phone appointment scheduling, new automated phone system, and end of day procedures.

Check-in

The current state check-in process, which can be seen in Appendix L, begins with the patient approaching the M-Works front desk area, the patient is then inquired if they have an appointment scheduled. If the patient does have an appointment their name is located on the Appointment list and highlighted. If the patient is a walk-in their name and appointment type is written on the Walk-in list and highlighted. The Referral form is then obtained from the patient if they did not turn it in at an earlier time, then the patient is asked the reason for their visit. If the patient is being seen for a physical their client profile is checked, and it is determined if the patient is new or returning. If the patient is new, their Patient chart is created, and if they are returning their chart is retrieved from the file room. Then, the Referral form is added to the Patient chart, the appropriate forms are obtained, such as the questionnaire, and Patient History forms. The Result form is then highlighted in reference to the patient's visit, and the patient's relevant paperwork is stamped. Lastly for the physical, the patient information and current date is entered into the RETURN system. If the patient is being seen for a work injury it is determined if they are new or returning. If they are new, their patient chart is created, and if they are a follow up their patient chart is obtained from the file room. Then the Referral form is added to the Patient chart, the relevant paperwork is then stamped, and last of all the patient information and current date is entered into the RETURN system. When a patient is coming in for a drug screening, the patient is given the Patient History paperwork to complete, then the Referral, Chain of Custody, and Patient History form is stapled together and then filed. Then the relevant paperwork is stamped, and finally the patient information and current date is added to the RETURN system.

The future state check-in process, which can be seen in Appendix S, is similar to the current analysis, with the exception of two changes. First, if a patient is a walk-in patient they are asked if their employer called that day in order to notify M-Works to expect that patient for a walk-in visit. If the patient's employer did call in, then the patient's name is asked for, and their already prepared paperwork is retrieved. Then the patient's name and appointment type is written on the walk-in list. If the patient's employer did not call in the patient's name and appointment type is written on the
walk-in list as for the current state check-in process. The second change is that when a patient arrives for a physical, instead of the staff highlighting the result form for the patient’s visit the boxes could be checked off.

Automated Phone System

The automated phone system begins with a customer calling the general M-works phone number. The customer reaches a welcome greeting, and is given a selection of four choices: customer service, marketing, directions, clinic location and contact information. If the client needs directions, he will be given additional choices of the direction that he is driving from.

To improve this phone system, the future state flow recommends that one additional option is placed on the automated phone system. This option will assist in filtering calls and sending every customer to the appropriate person. The future state flow diagram will follow the same order as the current state diagram, but additionally, it will ask the customer if they would like to schedule and appointment or have a billing question under the additional option will allow the customer to select whether they are calling to schedule an appointment, walk-in for a drug screening, or other questions.

Phone Appointment Scheduling Process

The appointment scheduling process begins with an Employer calling the M-Works front desk. The employer is asked about the type of appointment that they would like to schedule. If it is a drug screen appointment, the front desk will ask and verify the patient’s name and the time being sent, the employer will be instructed to notify the patient to bring the employer’s referral information and to write the information on the walk-in sheet. If the employer is calling regarding a work-injury, physical, or physical therapy appointment, the employer will be asked if the patient has been to the site before. If the answer is negative, the front desk will request name and social security number as well as date of birth of patient. If this information is not available, the most available information will be recorded and appointment slot will be closed out in system until more information is given to M-works. If the information is available, or if the patient has been to clinic before, find out what the specific information regarding visit, and schedule the appointment in the CLS system. To end the process, the employer is informed to fax the referral information to the front desk, or to alert the patient to bring referral to clinic.

The future state process for this flow chart, has only one minor change. To accommodate the email requests for scheduling, the front must first determine the mode of transmission of the appointment request. If request comes by email, the front desk must schedule appointment using through the system and record the name and information from the email of client. If the request is made by phone, then the current state flow is followed.

End of day procedures

For the end of day procedures current state, which can be seen in Appendix R, one of the clerks makes three copies of the clinic schedule. Two copies are used to verify that each patient that checked out of the clinic has a work status and billing form. This verification is done by highlighting each patient’s name that has the required corresponding forms. The last copy is given to the clinic secretary. This process can be improved by eliminating 2 of the clinic schedule copies.
The recommended future state of the end of day procedures can be seen in Appendix V.

To help M-Works document their 7 major processes, our team created the table below.

Table 2. Primary work loads.

<table>
<thead>
<tr>
<th>Workload Type</th>
<th>Description</th>
<th>Average Monthly Volumes</th>
<th>Current Inventory</th>
<th>Cycle Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Check-in patient</td>
<td>Checks in the patient by highlighting name and handing him/her the paperwork.</td>
<td>xx units</td>
<td>xx units</td>
<td>xx units</td>
</tr>
<tr>
<td>Check-out patient</td>
<td>Checks out patient by scheduling next appointments and logging patient info on computer.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Schedule Drug-screening</td>
<td>Write patient's name on walk-in form for drug screen</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>appointments</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Schedule Medical Surveillance</td>
<td>Call employer to schedule appointment for patient.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Schedule Work Injury/Physical</td>
<td>Get patient information from employer. Create new file, use previous information if patient is not new. Schedule appointment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Therapy/Physical Surveillance</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surveillance appointments</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Schedule special exams</td>
<td>Determine what exams need to be scheduled. Determine availability. Create new file for new patient, or use previous patient information if not new. Schedule appointment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Answer questions</td>
<td>Answer questions on phone about work status and general clinic information.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perform end-of-day procedures</td>
<td>Copy clinic schedule, file and fax forms.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**STAFFING SUMMARY**

An organizational chart of the M-Works clinic can be seen in Appendix E. Table 3 shows a brief job
description of the front desk staff.

Table 3. Brief job description.

<table>
<thead>
<tr>
<th>Name</th>
<th>M-Works title</th>
<th>University title</th>
<th>Front desk job description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bobbi Kunzelman</td>
<td>Client Service Associates</td>
<td>Outpatient Clerks III</td>
<td>• Performs basic front desk duties</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>o Answer telephones</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>o Check Patients in</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>o Schedule appointments</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>o Check Patients out</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>o Schedule any referral appointments and process referral form</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>o Verify encounter forms against clinic register and investigate missing forms</td>
</tr>
<tr>
<td>Lisa Pollock</td>
<td>Head Client Service Associate</td>
<td>Outpatient Clerk IV</td>
<td>• Performs basic front desk duties</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Performs additional front desk tasks</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>o Assist with and monitor training of Outpatient Clerk III</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>o Monitor pending charts and ensure follow-up</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>o Assist Clinic Manager with special requests</td>
</tr>
<tr>
<td>Jill Bridson</td>
<td>Clinic Manager</td>
<td>Operations Manager</td>
<td>• Performs basic front desk duties when office is extremely busy or during lunch break</td>
</tr>
</tbody>
</table>
ANALYSIS AND RECOMMENDATIONS

RECOMMENDATION 1

Problem Statement and Root Cause Analysis

The front desk receives many phone calls throughout the day from employers and patients. Most of the calls are from employer scheduling appointments for their employees. Since M-Works is a walk-in clinic they receive patients with and without appointments. Many times the phone interrupts computer work or patient assistance. Also, during lunch there is only 1 person to answer the phones.

Recommendation

Front desk should create a new email group on Groupwise called mworks. Each front desk staff member's uniquenames should be included in the mworks group. The email address would be mworks@med.umich.edu. Then, M-Works should contact employers by phone and email to inform them that there is an option to schedule appointments by email. Also, when patients are checking out, the front desk staff should inform patients that they accept appointments by email. Patients and employers should be encouraged to email appointments. For obtaining the email appointments, the email should be checked during a specific job rotation during the day. For example, since the staff rotates tasks by days, the day that the clerk is responsible for check-in, they would also be responsible for checking email twice a day at specific times. They would be responsible for scheduling the appointments and sending confirmation emails. Also, to establish standardization with the email system, M-Works should ask employers to send emails with specific subject headings and the front desk staff should be consistent when sending emails.

Another solution to reduce incoming phone calls would be to add additional options to the automated phone system. See Appendix T. These options would give the customer the choice of making a selections to inquire about scheduling appointments, ask a billing question, or ask other questions. This choice would reduce the number of ambiguous calls to the front desk, because customers will be directed to the appropriate department.

Suggested Subject Headings:

Appointment Needed - for employers and patients who are requesting an appointment
Appointment Confirmed - when front desk sends email back to confirm day and time
Reschedule Appointment - when employers or staff needs to reschedule an appointment

Benefits

Giving employers and patients the option to schedule appointments by email will provide the benefits listed below.
• Incoming phone calls will be reduced
• Less interruptions when assisting a patient
• More flexibility for employers and front desk staff
• Front desk staff will become more technically inclined

Costs

Costs for creating a new email address for M-Works cannot be quantified because there will not be any one time or annual costs. However, some intangible costs may apply. The staff members may become frustrated because they feel they are adding an additional responsibility instead of reducing the workload. In the beginning, the email system may cause frustration. After the staff members are familiar with checking email, they will understand that the scheduling appointment through email allows them to assist patients with fewer interruptions.

Recommendation 2

Problem Statement and Root Cause Analysis

The M-Works front desk staff performs excessive copying and faxing throughout the day, although mainly at the end of the workday. This occurs because they must make several copies of the clinic schedule as well as copies of the billing, result, and work status forms. Then, forms are distributed to billing, employers, and patients by mail, fax, or in person. To reduce wasted paper and eliminate costs, it is recommended that there is a reduction in the amount of overall copying and faxing that occurs.

Recommendation

To reduce the amount of paper that is used and the amount of paperwork required of the front desk staff, it is recommended that M-Works incorporate an Intranet site and utilize their email system. The Intranet site would consist of all M-Works common files, and it will allow the front desk staff easy accessibility. The M-Works Intranet would serve as a way to reduce copying. In place of making copies and faxing information to outside units, M-Works could give each organization that it works with a password that would access the Intranet site. Specific information regarding their account with M-Works would be posted to the website, and concerns would be communicated through an email client attached to the website. In addition to reducing copying the amount of copies made of the client schedules during the end of day procedures could be reduced by only making 1 copy instead of 3. The email system will be useful in terms of sending Referral forms by email in an attachment if the employer prefers to send the Referral form by this method.

Benefits

The annual savings of workload reduction is a total of $32,500. This includes $25,000 salary pay for an Outpatient Clerk III, as well as 30% in benefits, which is $7,500. In addition 480 sheets of paper will be saved per year.
Cost

Installing an Intranet system as well as employee training for proficiency in using the internal system will result in one-time costs of

- $260 for employee training
- $1,200 for Intranet software

Recommendation 3

Problem Statement and Root Cause Analysis

The front desk has many responsibilities. So many times they feel overburdened and stressed because they are responsible for all of the following duties:

- Copying multiple forms of patient's paperwork
- Faxing patients' paperwork to multiple employers
- Mailing forms to billing
- Answering phone calls
- Assisting patients during check-in and check-out
- Logging/verifying information
- Entering information in computer
- Filing paperwork and forms
- Scheduling appointments during check-out process and over the phone
- Answering general questions about clinic (directions, hours, etc.) over the phone
- Scheduling special exams over the phone

Recommendation

To allow front desk staff to focus on administrative duties, it is recommended the front desk staff schedule appointments through the intranet system described above. This system would allow the front desk to directly receive appointments from the client and to input the information into the appointment scheduling system.

The second recommendation is to enhance the cross-functionality of the staff so each staff member understands all duties. This will allow for front desk employees to easily interchange roles with each other. Creating a specialized task system will allow front desk employees to
become more empowered in their positions as well as develop pride in the work activities which may increase worker pace as well as efficiency.

A third solution to decrease the total responsibility of each front desk employee would be to institute a dedicated call center to handle any phone related issues and concerns. The phone center will handle all incoming calls that come to the M-Works clinic. These workers can be placed in a small vacant room within the M-Works site away from the front desk unit. Thus, the front desk staff will be able to attend to patients within the facility without the distraction of incoming phone calls.

**Benefits**

- Call center saves the front desk the time of administering the forms and speaking to patient
- Defining specialized tasks allows front desk employees to have distinct tasks and more empowerment over their work
- Intranet allows front desk staff to redirect attentions from calls to obtaining appointment information by email.
- Call Center will allow additional employees to concentrate on calls only, and remaining M-Works staff to dedicate their time to other issues

**Costs**

- Staffing costs for University M-works Clerk III is approximately $25,000.
- As opposed to hiring an additional clerk, high school or college students can be hired at a fraction of the costs for $6-8/hr based on experience working a part-time work load of four hours per day. At an average rate of $7.00/hr the cost per year would be $6,720 per employee.
- Phone costs per line, is $23/month, at two phones is $552.
- Training for each employee at four hours during the work day would be $16.76/hour after benefits for an M-Works Clerk III employee for a total of $67.04 per each employee trained.

**RECOMMENDATION 4**

**Problem Statement and Root Cause Analysis**

When a patient checks out after a drug-screening visit, their forms are placed in a folder inside an open bin located on the check-out desk that is visible to other patients. This is an invasion of a patient’s privacy. The reason why the bin is in that location is so the MA’s can
conveniently get the records and mark the necessary information, and so the front desk can easily retrieve the forms from the bin.

**Recommendation**

To ensure that all patients’ records remain confidential and Policy 02-06-006D is followed, the drug-screening open bin should either be placed in a location that is not visible to the patient. Also, the bin should not be located on top of the check-out desk because patients can retrieve their personal or other records. The bin should be placed in a bin attached to the wall of the back front desk entrance.

**Benefits**

- Ensure patients confidentiality
- Keep MA’s comments and doctor’s results confidential
- Increase trust and sense of security between patients and M-Works
- Avoid costly confidentiality lawsuits
- Avoid JCAHO fines from www.med.umich.edu/i/jcaho/

**Costs**

- Installation of one bin at $15 per bin from www.officemax.com.
- Installation costs are negligible and bin may be installed by front desk employee
PROPOSED ENVIRONMENT OVERVIEW

RECOMMENDATION SUMMARY

If the front desk implements our recommendations, it will cost them approximately $8,664 annually, with a one time set-up and training cost of $1,475. The front desk will save $38,594 on an annual basis. Table 4 provides a brief summary of our recommendations.

Table 4. Recommendations summary.

<table>
<thead>
<tr>
<th>Problem Statement</th>
<th>Recommendation</th>
<th>Annual Benefits</th>
<th>Annual Costs</th>
<th>One Time Costs</th>
<th>One Time Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Front desk staff receives numerous telephone calls. And during lunch break, only 1 person can take calls.</td>
<td>Create M-Works email address. Then, inform employers and patients that appointment scheduling is preferred via email. Also, have 2 staff members leave first for lunch break, then the other staff member for the second break.</td>
<td>Reduced time on phone by 30 hrs/month = $6094 savings/year</td>
<td>$0</td>
<td>$0</td>
<td></td>
</tr>
<tr>
<td>Front desk staff does excessive copying/faxing to various employers and billing people.</td>
<td>Implement an M-Works Intranet site and utilize the email system</td>
<td>Reduced copying of clinic schedule $1,420</td>
<td>$0</td>
<td>Intranet software $1,200 Employee training $260</td>
<td></td>
</tr>
<tr>
<td>The front desk staff has too many responsibilities</td>
<td>Restructure the client service duties by incorporating a Call center, and by hiring part-time staff</td>
<td>$0</td>
<td>Part-time staff $8,112 Two additional phone lines $552</td>
<td>$0</td>
<td></td>
</tr>
<tr>
<td>Drug screening patients records are not kept confidential.</td>
<td>Conceal drug-screen information Lawsuits $Variable</td>
<td>Lawsuits $Variable</td>
<td>JACHO Fines $15</td>
<td>$0</td>
<td>Closed bin $15</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td>$38,594.92</td>
<td>$8,664</td>
</tr>
</tbody>
</table>
The action plan in Table 5 is based on the main recommendations proposed by our team.

Table 5. Action plan summary.

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Action</th>
<th>Time Frame</th>
<th>Person Responsible</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recommendation 1</td>
<td>Create <a href="mailto:mworks@med.umich.edu">mworks@med.umich.edu</a> email address. Then, inform current employers by phone and email that appointment scheduling is preferred via email.</td>
<td>1 week</td>
<td>Jill Bridson, Operation Manager, Clerks</td>
</tr>
<tr>
<td>Recommendation 2</td>
<td>Install an internal Intranet site to reduce paper waste. Email Referral forms to employees instead of faxing.</td>
<td>1 year</td>
<td>IT Network, Clerks</td>
</tr>
<tr>
<td>Recommendation 3</td>
<td>Create a call center. Hire part-time staff for lunch breaks. Train employees for cross-functional duties.</td>
<td>4 weeks</td>
<td>LaVaughn Palma-Davis, Administrator, Jill Bridson, Operation Manager</td>
</tr>
<tr>
<td>Recommendation 4</td>
<td>Attach drug screen been to wall in back entrance of front desk.</td>
<td>2 days</td>
<td>Clerks</td>
</tr>
</tbody>
</table>
M-Works Front Desk Tree Diagram

Front Desk Staff

- Handle paperwork
  - Prepare documents for mail
  - Physicals/Medical Surv.

- Copy/Fax documents
  - New patient
  - Old Patient
  - History Referral

- Use computers
  - Return System
  - University System

- Assist patients
  - Provide forms
  - Fill out paperwork

- Answer phones
  - Provide general info.

- Schedule apps.
## Detailed Methodology Chart

<table>
<thead>
<tr>
<th>Key Issue</th>
<th>Problem</th>
<th>Methodology (Team and Client suggestions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>*Issues studied</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*Telephone system</td>
<td>Employees have difficulty transferring calls because lines are always in use.</td>
<td>Change order of options on telephone.</td>
</tr>
<tr>
<td>Data Entry</td>
<td>There are a lot of duplicated entries.</td>
<td>Evaluate data entry and attempt to interface systems within the front desk environment.</td>
</tr>
<tr>
<td>Referral authorizations</td>
<td>Referral authorizations are time consuming.</td>
<td>Further study-referral authorization process to determine what improvements could be made.</td>
</tr>
<tr>
<td>*Paper waste</td>
<td>Employees waste lots of paper faxing and copying.</td>
<td>Analyze the total number of faxes by compute the mean for the average number of faxes per week/day, to see if it can be reduced.</td>
</tr>
<tr>
<td>*Walk-ins</td>
<td>Walk-ins who need immediate physicals and drug screens arrive with no paperwork.</td>
<td>Increase communication between employers via phone, fax, and email that paperwork should be filled out and physicals should be scheduled. Also, train front desk on how to handle situation.</td>
</tr>
<tr>
<td>Patients fail to shows</td>
<td>A lot of incoming calls are received from patients who are calling to reschedule appointments.</td>
<td>Have MA’s handle follow-up calls and no-shows as well as incoming calls from patients. Have doctors take more initiative to answer patients’ calls.</td>
</tr>
<tr>
<td>*Amount of paperwork</td>
<td>Patients are required to fill a lot of paperwork, which requires front desk to file paperwork.</td>
<td>Evaluate whether patient needs to fill out medical surveillance forms every year. Print work status forms off next day. Have on-line client profiles.</td>
</tr>
<tr>
<td>*Lunch coverage</td>
<td>Only 1 call can be taken during lunch break.</td>
<td>Have employees take rotational lunch breaks.</td>
</tr>
<tr>
<td>General request for various records</td>
<td>A lot of records need to be pulled and recorded.</td>
<td>Have staff training on pulling medical records.</td>
</tr>
<tr>
<td>*Drug screening</td>
<td>Drug screens require a lot of work.</td>
<td>Look at amount of work required for drug screens and try to make it more efficient.</td>
</tr>
<tr>
<td>*Front desk staff responsibilities</td>
<td>Having staff do all jobs may be too much.</td>
<td>Consider breaking down responsibilities and developing a well-defined hierarchy structure.</td>
</tr>
</tbody>
</table>
M-Works staff surveys

Please try to answer the following questions to the best of your ability and as accurate as possible.

1. What kind of changes have you seen in the front desk procedures since you've been working here? If none, write None.

2. What kind of improvements have you seen in the front desk procedures since you've been working here? If none, write None.

3. What kind of improvements would you like to see in the front desk procedures? If none, write None.

4. Which of your job responsibilities would you eliminate and why? If none, write None.

5. What tasks require additional training or well-written procedures? If none, write None.

6. If you could change one thing about your job responsibilities, What would it be and Why? (elaborate)

ADDITIONAL COMMENTS:
## Purpose:
To obtain data regarding repetitive work elements during consecutive hourly time blocks.

### Front Desk Work Elements

<table>
<thead>
<tr>
<th>Time</th>
<th>7am</th>
<th>8am</th>
<th>9am</th>
<th>10am</th>
<th>11am</th>
<th>12pm</th>
<th>1pm</th>
<th>2pm</th>
<th>3pm</th>
<th>4pm</th>
<th>5pm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task</td>
<td></td>
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<td>Task</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note: Please place a check mark in the appropriate work category and time interval block.*
M-Works Organizational Chart
<table>
<thead>
<tr>
<th>Percentage</th>
<th>102/102</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>26%</td>
<td>27/102</td>
<td>7</td>
</tr>
<tr>
<td>3%</td>
<td>3/102</td>
<td>6</td>
</tr>
<tr>
<td>33%</td>
<td>34/102</td>
<td>5</td>
</tr>
<tr>
<td>5%</td>
<td>5/102</td>
<td>4</td>
</tr>
<tr>
<td>20%</td>
<td>20/102</td>
<td>3</td>
</tr>
<tr>
<td>7%</td>
<td>7/102</td>
<td>2</td>
</tr>
<tr>
<td>6%</td>
<td>6/102</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Element Name</th>
<th>Element #</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filing</td>
<td></td>
</tr>
<tr>
<td>Handling paperwork</td>
<td></td>
</tr>
<tr>
<td>Copying/Printing</td>
<td></td>
</tr>
<tr>
<td>Using computer</td>
<td></td>
</tr>
<tr>
<td>Lifting patient</td>
<td></td>
</tr>
<tr>
<td>Lifting the phone</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
</tbody>
</table>

Preliminary work sampling data
Weekly clinic schedule data

Appointment Visits
- Drug screening: 17%
- Medical surveillance: 26%
- Physical therapy: 20%
- Work injury: 37%

Walk-in Visits
- Drug screening: 83%
- Medical surveillance: 6%
- Work injury: 11%
Appendix I

Percentage of visit type for patients by appointment

*Data Collected over a Period of 1 Week (5 days)
From October 2 to October 6, 2000

Appointment Patients

<table>
<thead>
<tr>
<th>Type of Visit</th>
<th>Total Volume for Each Type</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work Injury</td>
<td>46</td>
<td>36.80%</td>
</tr>
<tr>
<td>Physical Therapy</td>
<td>25</td>
<td>20.00%</td>
</tr>
<tr>
<td>Medical Surveillance</td>
<td>33</td>
<td>26.40%</td>
</tr>
<tr>
<td>Drug Screen</td>
<td>21</td>
<td>16.80%</td>
</tr>
</tbody>
</table>

Overall Total

125
Percentage of visit type for walk-in patients

*Data Collected over a Period of 1 Week (5 days)
From October 2 to October 6, 2000

**Walk-in Patients**

<table>
<thead>
<tr>
<th>Type of Visit</th>
<th>Work Injury</th>
<th>Medical Surveillance</th>
<th>Drug Screen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Volume for Each Type of Visit</td>
<td>11</td>
<td>6</td>
<td>83</td>
</tr>
<tr>
<td>Percentage</td>
<td>11.00%</td>
<td>6.00%</td>
<td>83.00%</td>
</tr>
<tr>
<td>Overall Total</td>
<td>100</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Front Desk Work Element Data Summary

*Taken in hourly intervals from 7 am to 5 pm
*Data collected from two staff members on November 27 and 28, 2000

### Work Injury Occurrence

<table>
<thead>
<tr>
<th>Work Injury</th>
<th>Occurrence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asking if New Patient/Validate Info/Log User Info. For Work Injury</td>
<td>1</td>
</tr>
<tr>
<td>Answer Phone for Work Injury</td>
<td>2</td>
</tr>
<tr>
<td>Making Appt. for Work Injury Patient</td>
<td>1</td>
</tr>
</tbody>
</table>

### Medical Surveillance Occurrence

<table>
<thead>
<tr>
<th>Work Element Category</th>
<th>Occurrence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scheduling Appointment for Medical Surveillance</td>
<td>1</td>
</tr>
<tr>
<td>Leaving Message for Medical Surveillance</td>
<td>1</td>
</tr>
</tbody>
</table>

### Office Occurrence

<table>
<thead>
<tr>
<th>Work Element Category</th>
<th>Occurrence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Talking to Patient</td>
<td>1</td>
</tr>
<tr>
<td>Away from Desk/At Lunch</td>
<td>1</td>
</tr>
<tr>
<td>Asking a Question</td>
<td>1</td>
</tr>
<tr>
<td>Preparing a Patient's Chart</td>
<td>2</td>
</tr>
<tr>
<td>Going over Schedule</td>
<td>1</td>
</tr>
<tr>
<td>Returning Message from Patient to Reschedule Appt. from Worklist</td>
<td>1</td>
</tr>
<tr>
<td>Sorting Medical Surveillances</td>
<td>1</td>
</tr>
<tr>
<td>Pulling Charts for Next Day</td>
<td>1</td>
</tr>
<tr>
<td>Making Copy</td>
<td>4</td>
</tr>
<tr>
<td>Checking Patient Out in Computer</td>
<td>3</td>
</tr>
<tr>
<td>Faxing Information</td>
<td>1</td>
</tr>
</tbody>
</table>

### Physical Preplacement Occurrence

<table>
<thead>
<tr>
<th>Work Element Category</th>
<th>Occurrence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Check In Patient for Physical Preplacement</td>
<td>3</td>
</tr>
</tbody>
</table>
Patient Check-in Process Current State

Patient arrives at the M-Works front desk

Ask patient if they have an appointment?

Yes
- Highlight patient's name on Appointment list

No
- Write patient's name and appointment type on Walk-In list and highlight

Obtain Referral form from patient if applicable

Ask patient the reason for their visit?

Physical
- Check client profile

Work Injury
- New or returning patient?

Drug Screen
- Give patient the Patient History paperwork to fill out
Patient Check-out Process Current State

Patient is ready to be checked out

Reason for Clinic Visit?

Drug Screen

Place Paperwork in Tray

Work Injury

Review Work Status Form

Appointment needed?

Yes-referral

Verify Authorization Information on Client Profile

Schedule an Appointment

Make copy of work status for patients

No

Give copy of Work Status report to patient

Yes-follow-up

Use UM Scheduling System to make an appointment

Make copy of work status for patients

Physical

Verify paperwork

Doctor Signs Result Form
Patient Leaves

Check out Return System

Copy Billing Form

Put in Bin

Visit type?

Work Injury

Copy Work Status Form

Put in bin and Fax to company

Fax to client according to profile

Physical

Company/ Organization of Patient?

U of M

Copy Result Form

Drug Screen

Separate Chain of Custody Form

Mail to Employer and Medical Review Officer

Others

Fax appropriate forms to client according to client profile

Put in bin to be filed
Phone Appointment Scheduling Process Current State

Patient would like appointment

Type of appointment

Drug Screen
16.8% of patients

Verify Patients Name, employer, and time being sent

Work Injury/
Physical/
Physical Therapy
56.8% of patients

Has the patient been here Before?

No

Name, Social Security #,
Date of Birth available?

No

Record
Record information available and close out appointment slot.

Yes

Validate specific appointment reasons (tests, MD, etc.).

Yes

Schedule Appointment in CLS system.

Inform Employer to Fax Referral or Have Patient Bring Referral.

Write information on Walk-in Sheet.
Has the patient been here before?

Yes

No

Name, Social Security #, Date of Birth available?

Yes

No

Record information available and close out appointment slot

Validating specific appointment reasons (tests, MD, etc.)

Schedule Appointment in CLS system

Inform Employer to Fax Referral or Have Patient Bring Referral
Call concerning billing questions, referral questions, miscellaneous

Type of Call ?

Referral Questions  Billing Question  Miscellaneous

Transfer Call to Front Desk Staff  Transfer Call to Account Representative  Transfer call to Client Service Representative

Note: End of Front Desk Interaction; Account Representative, Client Service Representative handles further processes
Client Service Questions Process Current State

- Employee Calls front Desk with Concerns re: second opinions, special exams
- Question is placed in telephone information log
- Representative places log in front desk tray
End of Day Process: Current State

1st: Match encounter forms with clinic schedule

Which copy is it?

2nd: Match work status forms with clinic schedule by using highlighter

File all faxed forms

3rd: Give copy (3rd copy) to clinic secretary

Match encounter forms with clinic schedule by using highlighter

Mail to billing personnel

Make 3 copies of clinic schedule
Patient Check-in Process Future state
Phone Appointment Scheduling Future Process

Patient would like appointment

Transmission of Appointment Request

Email

Schedule Appointment in CLS system

Type of Appointment

Work Injury/Physical Therapy

Drug Screen

Phone
Automated Phone System

Patient would like appointment

Transmission of Appointment Request

Phone

Work Injury or Physical?

Drug Screen

Email

Work Injury/Physical/Physical Therapy

Schedule Appointment in CLS system
Write information on Walk-In Sheet

Has the patient been here before?

Name, Social Security #, Date of Birth available?

Yes

Record information available and close out appointment slot in CLS system

Validate specific appointment reasons (tests, MD, etc.)

Schedule Appointment in CLS system

Inform Employer to Fax Referral or Have Patient Bring Referral

No

Verify Patients Name, employer, and time being sent

Write information on Walk-In Sheet