UNIVERSITY OF MICHIGAN HEALTH SYSTEM

Program and Operations Analysis

Analyzing Impact of Eliminating Authorizations for Blue Care Network Assigned Patients

Final Report

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Executive Summary

The sale of MCARE to Blue Care Network (BCN) has given the University of Michigan Health System (UMHS) the opportunity to eliminate the need for referrals and authorizations for patients assigned to MCARE and BCN. UMHS is concerned that eliminating the need for referrals and authorizations for patients assigned to MCARE and BCN will cause an increase in retroactive authorizations, rework, and the amount of write-offs. MCARE was the previous health insurance provider at the UMHS. This project addressed how authorizations are currently handled within BCN and will analyze the potential impact the transition from MCARE to BCN will have. Three main issues were studied: first, we studied the current information flow for the authorization process; second, we evaluated rejection rate data to find unnecessary authorizations; and third, we developed recommendations on how to reduce retroactive authorizations (authorizations done by back end billing). Since the UMHS has an expansive amount of departments within its system, this project was only centered around six clinical areas, which included Physical Therapy and Occupational Therapy (PTOT), General and Plastic Surgery, Radiology, Cancer Center, and Dermatology. The first task was to go to each department and conduct a thorough analysis of the current authorization system through interviews, observations, and time studies. The second task was to obtain information on what happens to those procedures that aren’t authorized by interviewing the back end billing office administrators and retrieving data which includes any retroactive authorizations and charges and volume by CPT code for both MCARE and BCN.

A comparison between all of the clinic authorization processes found that differences between clinic authorization processes result in more time being taken per authorization in the inefficient clinics. We also investigated individual CPT (Current Procedural Terminology) codes to find unnecessary authorizations. Analysis of rejection rates by CPT code shows that many authorizations are always approved and are therefore unnecessary. A list of authorizations deemed necessary through our data analysis is provided in Table 3 by CPT code.

The sale of MCARE to BCN will make the MCARE authorization process disappear, and every customer that previously required an MCARE authorization will now require a BCN authorization. Since BCN authorizations take longer than MCARE authorizations the clinic workload will increase. We used time studies and the volume of MCARE authorizations last year to calculate anticipated increase in workload. We then used the average authorization coordinator salary to calculate the cost of this increase in workload. The full time equivalent (FTE) costs per clinic range between $3000 and $19,000. The largest cost impact will occur in General Surgery which has an FTE cost of $18,898.81.

We recommend two changes to reduce clinic workloads. First, since Radiology takes the least amount of time, we recommend that every other clinic model their processes as close to radiology as possible. Second, each clinic should eliminate unnecessary authorizations by using the CPT code lists we have developed. These CPT code lists consist of the CPT codes that had a rejection rate of more than 0%. Each clinic should use these lists to keep track of the CPT codes that are known to be retroactively obtained from the back-end billing office.

Back-end billing will have an increased workload since BCN authorizations have a higher
rejection rate than MCARE authorizations. We have two recommendations to reduce back-end billing workload. First, back end billing should increase communication with clinics by developing monthly reports on the amount of retroactive authorizations per clinic and sending these monthly reports to each clinic. This will also show what clinic is the most thorough at retrieving authorizations therefore causing each of the clinics to become more competitive to look better comparatively. Our second recommendation is to have a back-end billing administrator monitor the number of retroactive authorizations to decide whether further measures need to be taken.

If the clinics use the CPT code lists and aren’t concerned as much with every other CPT code then not only will their workload decrease but this will also cause a decrease in the amount of rework in back end billing. Communication between the back end billing department and the different clinics will also help decrease the amount of rework in back end billing and further decrease the amount of write-offs per year.

**Introduction**

The sale of MCARE to Blue Care Network (BCN) has given the University of Michigan Health System (UMHS) the opportunity to evaluate the need for referrals and authorizations for patients assigned to MCARE and BCN. The standard authorization system involves multiple databases and varying procedures handled over various departments which cause confusion for workers, loss of work time while tracking down authorizations, and the need for time consuming retroactive authorizations. UMHS is hesitant to eliminate the authorization system because they are concerned that if BCN does not pay for procedures then UMHS could either have a substantial increase in the number of retroactive authorizations handled by back-end billing or they will not get paid. Therefore, the Director of Reimbursement asked our team to conduct a comprehensive study of the Surgical, Physical Therapy and Occupational Therapy (PTOT), Dermatology, Radiology, and Cancer departments to analyze the impact of eliminating authorizations. This goal was accomplished through tasks including: flow charting the whole process, observational analysis, and data analysis determining key procedures for which UMHS is at risk of not being reimbursed. From our conclusions, we recommend changes to address the concerns of the UMHS. We made recommendations that streamline the process and present them for possible implementation. The purpose of this report is to present the findings this project.

**Background**

MCARE was the previous health insurance provider at the UMHS. Under MCARE, authorizations and referrals were always required for MCARE to be paid for all medical expenses. The sale of MCARE to BCN will give the UMHS an opportunity to evaluate the need for the referral and authorization system for their assigned BCN patients. Patients that are not assigned will still need referrals and authorizations from their primary physicians. The current process for storing and updating authorizations as well as determining whether the patient is assigned involves multiple databases for information. Each medical department has a unique set of procedures for acquiring authorizations. The complexity of the current BCN system carries many flaws that include redundancies of authorizations, increased work caused by unnecessary
time spent tracking down authorizations, and possible financial losses. Therefore, the expectations for this project include:

- Discovering the causes of the problems within the current BCN authorization system
- Providing recommendations to improve the current process as well as methods to implement new standards into the new authorization process
- Hypothesizing possible impacts on the authorization system from the transition from MCARE to BCN

**Project Scope**

This project addressed how authorizations are currently handled within BCN. Analysis covered authorizations from their origin to their storage in data systems. This project included recommendations on which procedures cannot be eliminated based on data analysis. This project included recommendations on how to handle required authorizations for assigned and unassigned patients in the future. Authorizations for patients on other insurance plans were not addressed. Referrals were also not examined.

**Key Issues**

The key issues we addressed are listed below:

- Examined current information flow of authorizations across departments
- Explored the potential for patients to receive medical attention for procedures not covered due to limits or medical necessity specifications
- Eliminated the work of unnecessary authorizations
- Reduced the amount of rework associated with BCN authorization process

**Approach and Methodology**

Since the UMHS has an expansive number of departments within its system, this project centered around only six departments or clinical areas identified by our client, which included PTOT, General and Plastic Surgery, Radiology, the Comprehensive Cancer Center, and Dermatology.

The first objective was to go to each department and conduct a thorough analysis of the current authorization system through interviews, observations, and time studies. The referral and authorization coordinators as well as the administrators for each clinic were interviewed about the current authorization processes for both MCARE and BCN. Observations were also made about the current authorization processes. Since there was an infrequent volume of BCN and MCARE authorizations each day, the team developed a time sheet with the beginning time, ending time, whether it was BCN or MCARE and how many MCARE authorizations were retrieved in one phone call. From this analysis, information was collected on the type of systems that were being used for the authorization process for both MCARE and BCN. The team developed flowcharts for each department for a better understanding of the flow of the authorization process. The time studies were collected for a later FTE calculation.
The second objective was to obtain information on what happens to those procedures that aren’t authorized and have to be either retroactively authorized by the different billing departments or are written off. A meeting was set up with an administrator from the back end billing office to collect crucial information regarding the second objective. Since data was not accessible and since two different billing offices deal with the hospital and professional charges, data requests were sent to both offices regarding the amount of rejections and write-offs including the volume and the amount by CPT code and department. Another data request was sent regarding the amount of charges for each CPT code for each department. All of this data was sent by email.

The data analysis consisted of calculating the total volume of procedures by CPT code from January 2006 to June 2006 for both MCARE and BCN. Then the total volume of rejections by CPT code for both MCARE and BCN were calculated. From the total volume of rejections by CPT code and the total volume of procedures by CPT code a rejection rate was formulated for each CPT code. The time studies collected and the average salary calculated for the referral and authorization coordinator were used to calculate FTE costs per clinic. The clinics were then compared by rejection rates and FTE costs.

Findings: Current Authorization System

The following sections go through each department and thoroughly describe the current BCN authorization process. The observations occurred over several days at each clinical area. We observed and interviewed referral and authorization coordinators about the current BCN authorization process and developed flowcharts and analysis about the impact and problems at the clinical areas. Appendix A contains flowcharts for each of the processes described in the sections below. There is also a section that describes the MCARE authorization process, which is the same for each department.

PTOT (MedSport at Domino’s Farms)

The authorization process for Physical Therapy (PT) at MedSport involves the collaboration of the receptionists, referral and authorization coordinator and the therapists. There is one referral and authorization coordinator handling all the PT authorization requests for the facility.

Process
 Patients schedule appointments with the reception staff. If the patient is new, or has not been to the clinic in the past month, the reception staff creates a new ‘face sheet’ which contains the patient’s demographics such as their patient ID and contract ID. The chart is sent to the referral and authorization coordinator to obtain an authorization for service. Once the referral and authorization coordinator (RAC) has the patient’s chart, the RAC searches the patient on CareWeb to determine if they still have an active appointment. If the appointment is still active then the authorization process continues, otherwise the chart is returned to the reception staff.

The RAC opens eReferral to search for the patient’s insurance benefits from their plan. The search is conducted by their insurance ID. The RAC retrieves the patient’s benefits limits (e.g. 12 visits in one year, 6 visits in 60 days) on eReferral and records the copay for each visit on a Physical Therapy and Insurance Verification (PTIV) form that is attached to the patient’s folder.
and charts. The RAC then searches for the patient’s authorization based on the treatment that is being conducted. If there is an authorization in the system, the number of authorized visits is recorded and the chart is delivered to the reception staff in preparation for the patient’s visit. If the authorization for the treatment is not in the system, then the RAC contacts either the patient or the PCP to inform them they need to obtain a referral or authorization for the upcoming appointment. The authorization process is now out of the hands of the RAC and the patient will be periodically queried on eReferral over the next few days to see if a referral and authorization has been updated into the system. If the patient’s appointment occurs without proper authorization, the patient is required to fill out an insurance verification waiver assuming all liability to the patient for payment on any services hereafter.

Once the patient is seen and the proper authorizations have occurred, then the therapist files the patient’s chart at the desk area of the team that the therapist belongs to. At MedSport, therapists are divided into teams at and work together in their small team to see patients. When the patient returns to MedSport for a subsequent visit, the patient’s chart is pulled from the filing cabinet and the therapist is responsible to update the number of visits on the patient encounter form. As the number of visits approach the authorized limits, the chart must be returned to the RAC to obtain another authorization for future visits. Unfortunately, this does not always occur when the patient approachess their limits and they may go over their authorized limits.

**Issues**

A problem can also occur if the patient seeks physical therapy at a different UMHS location or clinic. If a patient who was seeing a therapist at the UM Hospital desired to transfer to MedSport, the patient would be considered new to the MedSport clinic. The authorization for visits to the Hospital would have to be lifted and a new authorization would be required at MedSport before the patient could seek services. Communication between facilities within UMHS is lacking, thus an authorization may not be obtained, or if it is obtained, the work required was unnecessary because the patient was already authorized for treatment within UMHS.

Referrals have been lifted for assigned patients, but methods to actually determine if a patient is assigned in-network are lacking. For MCARE, the Main Frame system will state next to the PCP if they are in-network or out-of-network. For BCN though, it is difficult to make this conclusion. The RAC knows from years of work which doctors are in-network and which aren’t. If a new employee attempted to obtain an authorization, the current process would be difficult to make such conclusion. Although unclear, easier methods should be enacted to determine if the doctor is in-network.

**Comprehensive Cancer Center**

The Cancer Center consists of a business service team of referral and authorization coordinators that conduct most of the referral and authorization process for patients. Since cancer is a disease that creates such strains on the patient and families, as a service to the patient the business service team assumes a more proactive role in seeing through that the proper authorizations are obtained for the patient.
**Process**

Each day, a team member is assigned an insurance provider (e.g. MCARE, BCN, Other Commercial) to obtain authorizations for patients. Each morning CBW provides a list, separated by insurance provider, is provided to the referral and authorization coordinator (RAC). The list sorts and queues patients that need authorizations according to the number of days in advance of treatment. The patient with the closest appointment is found on CBW by the RAC. They look for the referral in IDX and if the proper referral is not in the system, an insurance referral request is faxed to the PCP. A delay of approximately 1-2 days can occur until the PCP returns a fax to the business service team, at which time the business service team sends the referral to imaging so it can be updated into IDX and the authorization process will continue as normal.

If the patient has a referral in IDX, then the RAC searches for the patient on eReferral by contract number. The authorization is requested by procedure code and instant feedback is then provided via eReferral to the RAC if the authorization is approved or rejected. If approved, then the RAC updates the Managed Care tab in CBW notifying the clinic coordinator at the location of the procedure that the proper authorization was obtained. If the authorization is declined, a few options can occur. If the appointment is more than one day away, then all attempts are made to get the referral by faxing an insurance request form over to the PCP again. If the procedure is less than a day away, the clinic coordinator is notified and the patient informed they will have to sign a waiver before the procedure is conducted.

**Issues**

As of early April 2007, referrals have been lifted for BCN and MCARE assigned in-network patients. The initial thought of lifting referrals would be that work is eliminated from the system, making it easier to obtain authorizations. Instead of checking if the referral is in IDX, the RAC now checks Managed Care to see there is a consult in the system for the procedure being requested. The check for a consult is deemed an unnecessary step because it is acting as a crutch for the referral which is no longer needed. The process is the same for all steps after the check for the referral was previously made.

Since referrals are no longer required for some patients while required for others, the RAC must be made more aware who assigned and un-assigned members are. Currently no standard system is in place to determine assigned or un-assigned patients. The current staff has some methods in place they can use. In CBW, the doctor’s name and phone number are listed. The RAC can tell by the doctor’s name and phone number if they are in-network or out-of-network because the referral and authorization coordinators have been working for so long. Sometimes in CBW, specifically for MCARE, there will be a note stating the doctor is a ‘non-UMHS PCP’ signaling to the RAC that the patient needs a referral in place. Another method used by the team is to look up the doctor in a directory online, such as the directory on the UMHS website. This method is a last resort, but standardization needs to be in place for prompt and proper identification of the patient’s network.

**Radiology**

**Process**
The Radiology authorization team currently has five team members. Two team members work specifically with authorizing Blue Care Network. At the beginning of each day, each team member is given multiple forms with patient requests for authorizations for the different procedures. The team members in charge of BCN go through all of the forms and identify whether the patient is carrying BCN insurance. After identifying the BCN patient, the referral and authorization coordinator goes into the main frame system, gets the patient’s contract number, and codes his or her procedure and diagnosis. Then the coordinator goes into the eReferral system and searches for a global referral. If there is already a global referral and an authorization then the authorization process is finished. If there is already a global referral but there is no authorization, then the coordinator must request an authorization online. If there is no global referral, then the coordinator must contact the primary care physician, and then check on eReferral to see whether the procedure is approved or pended. If approved, the authorization process is finished, but if the procedure is pended then the coordinator will check back within 24 hours to see if the procedure is approved. If the procedure is not approved within 24 hours, then the patient will sign a waiver else the authorization process is finished.

Issues
One of the main issues with eliminating authorizations for BCN is identifying whether a patient is primary or not. The referral and authorization coordinator for Radiology can tell whether the patient is primary or not by looking on the scheduling sheets. The scheduling sheets will list whether the patient is a UMHS or non-UMHS patient. Going through the scheduling paperwork is tedious and having the schedule electronic would alleviate the extra work. One major issue that may cause the rejection rate to increase for Radiology is the amount of time that is allowed for a procedure to be authorized before having a patient sign a waiver. Twenty-four hours may not be enough time for BCN to authorize the procedure.

Plastic Surgery

Process
There is only one Plastic Surgery referral and authorization coordinator. The coordinator goes through a very similar process as the radiology referral and authorization coordinator. Forms for procedures of different patients are given to her throughout the workday in paper form. She goes through each form and identifies the BCN patients. After identifying the BCN patient, the referral and authorization coordinator goes into the main frame system, gets the patient’s contract number, and codes his or her procedure and diagnosis. Then the coordinator goes into the eReferral system and searches for a global referral. If there is already a global referral and an authorization, then the authorization process is finished. If there is already a global referral but there is no authorization, then the coordinator must request an authorization online. If there is no global referral, the coordinator must contact the primary care physician, and then check on eReferral to see whether the procedure is approved or pended. If approved, the authorization process is finished, but if the procedure is pended then the coordinator will check back within 24 hours to see if the procedure is approved. If the procedure is not approved within 24 hours, the procedure will not be conducted without pay from the patient. Patients can be identified as primary or not the same way that they are identified in Radiology. The scheduling sheets indicate whether the patient is UMHS or non-UMHS.
Issues
The biggest issue that Plastic Surgery might have is having the patient pay for the procedure before it actually takes place if the procedure cannot be authorized. Another issue might be not having a clear way to identify the number of visits that a patient has taken or the reason for the procedure.

General Surgery

Process
A single employee is responsible for obtaining authorizations from BCN for the General Surgery clinic. The authorization coordinator prints off the surgery schedule every Friday from ORMIS database. Once the schedule is printed, the authorization coordinator prints off all of the patients’ insurance information. The authorization coordinator then looks for the procedure name on the schedule and checks the procedure “cheat sheet” for the CPT code. The authorization coordinator keeps all high volume procedures on a small sheet so CPT codes can be easily obtained. If the procedure is not on the “cheat sheet” then the authorization coordinator must look in the CPT code reference book. After obtaining the CPT code the authorization coordinator checks for a global referral in IDX and eReferral. If a global referral doesn’t exist, the authorization coordinator must call the patient or the PCP to find out why it doesn’t exist. If a global referral does exist, the authorization coordinator calls BCN to obtain the authorization. After obtaining the authorization, the authorization coordinator checks eReferral to see if the authorization is pended. If pended, the authorization coordinator will wait three days and check again; if it still pended in eReferral the authorization coordinator will call BCN. If at any point the authorization coordinator checks eReferral and it is not pended the completed authorization is entered in C-cubed and the patient’s authorization is complete.

Issues
The most time consuming aspect of the general surgery authorization process is the call to BCN. The wait times can exceed 45 minutes and result in a large amount of wasted time for the authorization coordinator.

Dermatology

Process
A team of two employees are in charge of obtaining authorizations from BCN for the Dermatology clinic. At the Dermatology clinic patients will have their procedures completed the same day they receive their consultation. Therefore, authorizations are obtained after procedures have already been completed.

Five days prior to a procedure, the authorization coordinator checks CBW for scheduled visits. Each patient’s insurance information is then searched for in the IDA outreach software. Once the insurance information has been obtained, the patient’s PCP referral is located on eReferral. If a PCP referral does not exist, the authorization coordinator must contact the patient, the PCP, or both, and a delay occurs. Otherwise, the CBW software is updated to confirm the existence of a referral, and the clinic is prepared for the patient’s visit.
After the patient’s visit, the authorization coordinator receives a patient encounter form from the doctor detailing the procedure completed. If the procedure is a special case, then BCN must be called to obtain the authorization, otherwise a plan notification form is completed and entered into the eReferral system. If the system pends the request the authorization coordinator will wait approximately a week and check the system again. If the authorization is still pended the authorization coordinator will call BCN. If the system does not pend the request the authorization coordinator is finished with the authorization process.

Issues
The most time consuming aspect of the Dermatology process is the completion of the plan notification form. This form is currently necessary to get payment, but it contains a large amount of redundant information.

MCARE
The authorization process for MCARE is very similar for each department. Once the referral and authorization coordinator has received the procedure request forms and identified that the insurance is MCARE, the referral and authorization coordinator calls MCARE and requests authorizations over the phone. This process is generally faster than the BCN authorization process especially since the administrator can call to authorize more than one MCARE at a time.

Findings: Rejections
The necessary information to complete each authorization process summary was gathered through interviews with authorization coordinators. Time studies were used to obtain the time taken per authorization in each clinic. Data was provided from professional billing to determine rejection rates and annual volumes of procedures by CPT code.

Departmental Comparisons
Each of the departments uses the same authorization process for MCARE by calling MCARE to get the authorization. The main database system that is used for the authorization process for BCN is eReferral. EReferral is the only database system that actually connects the coordinator directly to BCN which provides authorizations for procedures. Dermatology, PTOT, Plastic Surgery, Radiology departments and the Comprehensive Cancer Center all use eReferral and the only department that doesn’t use eReferral is General Surgery. General Surgery calls BCN and BCN uses eReferral to authorize the procedure just like the other departments but General Surgery doesn’t have access to it. The patient authorization requests are printed in paper form for Plastic Surgery, Radiology, Cancer Center, and General Surgery. Dermatology actually uses Clinic Business Workflow to check the schedule 5 days in advance rather than receiving the schedule on paper form. At PTOT a new face sheet is formed for any new patient or for a patient who hasn’t visited in the past month so that person’s insurance and benefit limits may be determined and updated. One key note that was observed with all of the clinics using eReferral was the fact that it was a very difficult to navigate through eReferral and made for a more cumbersome authorization process.
The time studies for BCN authorizations show that General Surgery has the highest time for retrieving a BCN authorization (see figure 1). This is mostly due to the fact that General Surgery calls BCN to authorize the procedure instead of using eReferral. The other departments have approximately the same time for going through the BCN authorization process. Radiology appears to have the shortest time for going through the BCN authorization process.

**Figure 1: Time Taken per Authorization by Clinic**

Radiology has the highest rejection rate for both MCARE and BCN at 2.20% and 13.56% (see Figure 1). Plastic Surgery has the second highest rejection rate for BCN while General Surgery has the second highest rejection rate for MCARE. Cancer has the lowest rejection rate for both BCN and for MCARE as well. Since procedures for Cancer are much more serious than other procedures, the insurance companies are much more lenient to give authorizations. The Cancer Business Service Team takes any burden away from the patient in retrieving the referral from the Primary Care Physician. Radiology has the highest rejection rate of the departments, possibly because patients sign a waiver saying they are responsible for payment if an authorization is not approved within 24 hours of the initial authorization request.
When comparing both the rejection rate and the time studies, the Cancer Center has the most efficient process for retrieving authorizations from BCN. Dermatology appears to have an effective process with a moderate time of 8.6 minutes and the second lowest rejection rate out of all the departments observed.

Each department was able to obtain authorizations for MCARE approximately 3 times as fast as BCN (see Figure 1) MCARE authorizations are obtained faster because authorization coordinators can get more than one procedure authorized at once; BCN does not allow authorization coordinators to get more than one authorization at once. Also MCARE is known to be more relaxed on giving authorizations than BCN.

**Necessary Authorizations by CPT Codes**

The following is a list from each department of the CPT Codes that have a rejection rate that is larger than 0%. These CPT code lists should be used by authorization coordinators at each department so that if these CPT codes come up at any time an authorization would help eliminate any rework at the back end billing.

**Figure 3: Procedures that Should Still Require Authorizations by CPT Code by Clinic**
### Cancer:

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<th>Rejection Rate</th>
<th>Annual Volume</th>
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<td>32000</td>
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<td>4</td>
</tr>
<tr>
<td>93975</td>
<td>71.88%</td>
<td>32</td>
</tr>
<tr>
<td>99245</td>
<td>66.67%</td>
<td>9</td>
</tr>
<tr>
<td>93880</td>
<td>62.50%</td>
<td>8</td>
</tr>
<tr>
<td>99244</td>
<td>50.00%</td>
<td>2</td>
</tr>
<tr>
<td>99215</td>
<td>42.86%</td>
<td>7</td>
</tr>
<tr>
<td>99201</td>
<td>40.00%</td>
<td>5</td>
</tr>
<tr>
<td>10022</td>
<td>38.89%</td>
<td>18</td>
</tr>
</tbody>
</table>

### Dermatology

<table>
<thead>
<tr>
<th>CPT Code</th>
<th>Rejection Rate</th>
<th>Annual Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>99202</td>
<td>100%</td>
<td>1</td>
</tr>
<tr>
<td>99212</td>
<td>17.14%</td>
<td>35</td>
</tr>
<tr>
<td>99242</td>
<td>7.14%</td>
<td>182</td>
</tr>
<tr>
<td>99241</td>
<td>3.45%</td>
<td>116</td>
</tr>
<tr>
<td>99213</td>
<td>2.06%</td>
<td>97</td>
</tr>
</tbody>
</table>

### Plastic Surgery

<table>
<thead>
<tr>
<th>CPT Code</th>
<th>Rejection Rate</th>
<th>Annual Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>99202</td>
<td>40.00%</td>
<td>5</td>
</tr>
<tr>
<td>99243</td>
<td>14.74%</td>
<td>95</td>
</tr>
<tr>
<td>99212</td>
<td>3.92%</td>
<td>51</td>
</tr>
<tr>
<td>99213</td>
<td>3.92%</td>
<td>51</td>
</tr>
</tbody>
</table>

### Impact

After our data collection and analysis, we estimated the potential impact on clinical and back-end billing workload with the change from MCARE to BCN. We used an average salary for a referral and authorization coordinator to predict financial impacts. We also used the volume data and rejection rates to calculate the workload impact on back-end billing.

### Impact on Clinic Workload

The sale of MCARE to BCN will make the MCARE authorization process disappear, and every customer that previously required a MCARE authorization will now require a BCN authorization. We used time studies and last year’s MCARE authorization volumes to analyze the expected impact this will have on clinic workload.

We found that, on average, BCN authorizations take about three times as longer to complete than MCARE authorizations (see Figure 1). These values were taken from clinic time studies. The volume of MCARE authorizations per year was taken from professional billing data. We found the average salary of an authorization coordinator to be $34,305 per year with an additional 31.5% of salary to be used to calculate benefits. Therefore we found one FTE of an authorization coordinator worth approximately $45,111.
The equations used to calculate the FTE per year and costs per year:

\[
FTE = \frac{[(Time \ per \ BCN - Time \ per \ MCARE) \times Volume \ MCARE \ per \ year] \times 1 \ hour/60 \ min \times 1 \ FTE / 2080 \ hours}
\]

\[
Cost = (FTE/\text{year}) \times $34,305 \times (1 + 31.5/100)
\]

**Figure 4: Table showing increased FTE costs per year by clinic**

<table>
<thead>
<tr>
<th>Clinics</th>
<th>Volume MCARE</th>
<th>Time per BCN (min)</th>
<th>Time per MCARE (min)</th>
<th>FTE</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cancer</td>
<td>4808</td>
<td>6.7</td>
<td>2.7</td>
<td>0.15</td>
<td>$6,933.96</td>
</tr>
<tr>
<td>Dermatology</td>
<td>5050</td>
<td>8.6</td>
<td>6.8</td>
<td>0.07</td>
<td>$3,273.24</td>
</tr>
<tr>
<td>Radiology</td>
<td>3912</td>
<td>6.62</td>
<td>2.4</td>
<td>0.13</td>
<td>$5,944.64</td>
</tr>
<tr>
<td>General Surgery</td>
<td>1562</td>
<td>37</td>
<td>3.4</td>
<td>0.42</td>
<td>$18,898.81</td>
</tr>
<tr>
<td>PTOT*</td>
<td>1000*</td>
<td>7.63</td>
<td>2.28</td>
<td>0.04</td>
<td>$1,926.50</td>
</tr>
</tbody>
</table>

*PTOT volumes were not available, therefore the cost displayed is the cost per 1000 MCARE authorizations.

The FTE costs per clinic range between $2000 and $22,000. The largest cost impact would occur in General Surgery. The authorization coordinator in general surgery said the reason BCN authorizations take so long is the wait time on the phone is extremely long.

**Impact on Back-End Billing**

Authorizations that are not accepted are called rejections. Rejections are sent to back-end billing, where back end billing coordinators attempt to obtain a retroactive authorization. Retroactive authorizations can be viewed as rework which takes additional time and resources. Any increase in the amount of rejections will have a negative impact on the ability of back end billing to process retroactive authorizations effectively at their current staffing level.

The sale of MCARE to BCN means all authorizations that are currently obtained from MCARE will now be obtained from BCN. We anticipate an increase in the number of rejections since BCN’s rejection rate is significantly higher for each clinic. We used last year’s procedure volumes and rejection rates to estimate the increase in amount of rejections handled by back end billing. Figure 5 shows the rejection rates of each clinic for both MCARE and BCN, as well as an estimate for the number of additional retroactive authorizations.
Figure 5: Estimate of Additional Authorizations Handled by Back-End Billing Per Year

<table>
<thead>
<tr>
<th>Clinics</th>
<th>MCARE Volume</th>
<th>Rejection Rate</th>
<th>BCN Volume</th>
<th>Rejection Rate</th>
<th>Additional Retroactive Authorizations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cancer</td>
<td>5906</td>
<td>0.04%</td>
<td>2548</td>
<td>3.45%</td>
<td>201</td>
</tr>
<tr>
<td>Dermatology</td>
<td>5628</td>
<td>0.00%</td>
<td>996</td>
<td>5.42%</td>
<td>305</td>
</tr>
<tr>
<td>Radiology</td>
<td>4416</td>
<td>2.20%</td>
<td>752</td>
<td>13.56%</td>
<td>502</td>
</tr>
<tr>
<td>General Surgery</td>
<td>1806</td>
<td>1.66%</td>
<td>526</td>
<td>7.60%</td>
<td>107</td>
</tr>
<tr>
<td>Plastic Surgery</td>
<td>1538</td>
<td>0.15%</td>
<td>510</td>
<td>7.84%</td>
<td>118</td>
</tr>
</tbody>
</table>

The following formula was used to calculate the amount of additional authorizations:

\[
\text{Additional Retroactive Authorizations} = \text{Volume of MCARE} \times (\text{Rejection Rate BCN} - \text{Rejection Rate MCARE})
\]

We use Figure 5 with an estimate of time per authorization to obtain indirect costs in back end billing associated with the increased retroactive authorizations discussed in Figure 5. We then used an estimate of 5 minutes per retroactive authorization to find the amount of additional hours obtaining retroactive authorizations. The following formula was used.

\[
\text{Additional Hours} = \text{Additional Retroactive Authorizations} \times (5 \text{ minutes/authorization}) \times (1 \text{ hour} / 60 \text{ minutes})
\]

The amount of additional hours was used to estimate FTE’s assuming 2080 hours worked per year. Figure 6 shows the additional hours, additional FTEs required, and the estimated cost for each clinic, as well as a total for all six clinics. We assumed that a FTE in back end billing costs as much as an authorization coordinator in the clinics ($44,940 including benefits).

Figure 6: Estimate of the Additional Costs in Back End Billing

<table>
<thead>
<tr>
<th>Clinics</th>
<th>Additional Retroactive Authorizations</th>
<th>Additional Hours</th>
<th>FTE</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cancer</td>
<td>201</td>
<td>16.8</td>
<td>0.008</td>
<td>$ 361.89</td>
</tr>
<tr>
<td>Dermo</td>
<td>305</td>
<td>25.4</td>
<td>0.012</td>
<td>$ 549.14</td>
</tr>
<tr>
<td>Radiology</td>
<td>502</td>
<td>41.8</td>
<td>0.020</td>
<td>$ 903.83</td>
</tr>
<tr>
<td>General Surgery</td>
<td>107</td>
<td>8.9</td>
<td>0.004</td>
<td>$ 192.65</td>
</tr>
<tr>
<td>Plastic Surgery</td>
<td>118</td>
<td>9.8</td>
<td>0.005</td>
<td>$ 212.45</td>
</tr>
<tr>
<td>Total</td>
<td>1233.00</td>
<td>102.75</td>
<td>0.05</td>
<td>$ 2,219.96</td>
</tr>
</tbody>
</table>

The potential cost impact in back-end billing is low compared to the cost impact associated with the increase in clinic workload.

Recommendations

The authorization system faces two main problems. The first is dealing with an increase in clinic workload since BCN authorizations take longer to obtain than MCARE authorizations. The second is dealing with an increase in back end billing workload since BCN has a higher rejection rate than MCARE. In light of these issues we have developed the following recommendations.
Reduction in Clinic Workload

The authorization coordinators can have their workloads reduced several ways. The first way to reduce workload is to standardize the authorization process. As previously discussed, each clinic has its own way of dealing with authorizations. Since Radiology takes the least amount of time we recommend that every other clinic model their processes as close to radiology as possible. This measure will reduce unnecessary work and will help diminish the increased workload derived from the MCARE authorizations switching to BCN.

**Figure 7: Time Taken for Each BCN Authorization**

<table>
<thead>
<tr>
<th>Clinics</th>
<th>Time per BCN (min)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cancer</td>
<td>6.7</td>
</tr>
<tr>
<td>Dermatology</td>
<td>8.6</td>
</tr>
<tr>
<td>Radiology</td>
<td>6.6</td>
</tr>
<tr>
<td>General Surgery</td>
<td>37.0</td>
</tr>
<tr>
<td>PTOT</td>
<td>7.6</td>
</tr>
</tbody>
</table>

Another way to reduce clinic workload is to eliminate unnecessary authorizations. Many authorizations are never rejected by BCN. Since BCN has agreed to relax their authorization requirements the hospital has the opportunity to stop requiring authorization coordinators to obtain an authorization for procedures that are always approved. We used the rejection data from last year to find procedures that have a rejection rate greater than zero. These authorizations will still be necessary. We compiled a list of procedures that should still require an authorization. This list can be found in figure 3. The procedures are sorted by CPT code. The elimination of unnecessary authorizations will reduce clinic workload and should have no adverse effects.

Reduction in Back-End Billing Workload

Communication between back end billing and the clinics that initially handle authorizations should increase. If back end billing is seeing a large number of rejections from a certain clinic it should let them know that the clinic is taking the necessary steps to obtain the authorization. The back end billing employees can find problematic authorizations processes by keeping track of the amount of retroactive authorizations by clinic and CPT code. We recommend that back-end billing keep track of rejected authorizations, and that they send a monthly report to the clinics.

As previously discussed, the higher rejection rates of BCN compared to MCARE should result in an increased workload for back end billing. The amount of retroactive authorizations handled by back end billing should be monitored for 3-6 months to explore the effect of the transition from MCARE to BCN. The exact amount of increase will be valuable in deciding whether further measures should be taken.

Action Plan

Future teams who of analyze the authorization process for BCN should focus on the back-end billing department and monitor the amount of retroactive authorizations that are obtained throughout each month. CPT codes should be analyzed for each department through the back end
billing rejection and write-off data and clinics should be made aware of the certain CPT codes that are more prevalent to rejection. Also it is important for any team to have a contact that can easily access data quickly and efficiently. This will make future projects faster and easier.

We recommend that back-end billing compiles a monthly report for each clinic outlining what CPT codes had their authorizations denied. CPT codes that are rejected in high volumes should also attach the reason for most rejections. This will help clinics be more aware of how they can improve their authorization process.
Appendix A: Flowcharts

PTOT (MedSport at Domino’s Farms)

```
New patient chart delivered to R&A coordinator → Search for patient on CareWeb → Does patient have an active appointment? → No → Chart returned to receptionist

Yes → Search for patient in eReferral

→ Record benefit limits and copy on PT Insurance Verification form → Look for authorization in eReferral

→ Authorization in system? → Yes → Record # of authorized visits → Authorization Complete: bring chart to filing location

→ No → Wait for PCP to update eReferral with authorization (24-48 Hours) → Contact Patient or PCP to get referral/authorization
```
Cancer Center

R&A Coordinator gets authorization request on Clinic Business Workflow

Find patient on CBW

Is referral in IDX?
- Yes: Find patient on eReferral by contract #
- No: Fax insurance referral request to PCP

Fax to imaging for entry into IDX

Wait for PCP to fax referral back About 24-48 hours

Notify Clinic Coordinator: Patient signs waiver

Is referral in IDX?
- No: Fax insurance referral request to PCP
- Yes: Submit auth. request by procedure code

Fax insurance referral request to PCP

Submit auth. request by procedure code

Is appointment more than 1 day away?
- No: Authorization approved?
- Yes: Authorization complete

Authorization approved?
- No: Notify Clinic Coordinator: Patient signs waiver
- Yes: Update CBW (Managed Care tab)
Plastic Surgery

Patient request comes in for procedure → Go into Main Frame system → Get the patient's contract number → Code the Procedure and Diagnosis → Go to eReferral → Search for Global referral

Contact PCP → Is there a global referral? → Yes → Is there already authorization in system? → Yes → Request authorization online → No → Authorization Approved? → Yes → Authorization Complete → No → Wait for eReferral to be updated

Is it approved in 2 to 3 days? → Yes → Procedure will not be conducted without pay from the patient → No
General Surgery

Print off OR Schedule every Friday from ORMS Database

Print off insurance information from Main Frame for each patient

Find procedure listing on schedule

Is the procedure on the cheat sheet?

Yes

Call BCN to obtain authorization

Does a global referral exists in IDX and eReferral?

No

Call patient and PCP

Yes

Put obtained authorization into C3 system

Authorization Finished

No

Yes

Wait 3 days

Is the authorization still pended?

No

Yes

Is the authorization pended in eReferral?

Yes

Look for CPT code in reference book

No

Authorization Finished

No

No