Background

First trimester spontaneous abortion is defined as nonviable intrauterine pregnancy with either an empty gestational sac or fetal/embryonic without cardiac activity within the first 12-16 weeks. The incidence of first trimester spontaneous abortion is 10% of all clinically recognized pregnancy, with 80% of all pregnancy losses occurring within the first trimester. Ultrasound has been a valuable diagnostic tool throughout pregnancy, aiding in pregnancy location, viability and gestational age. Interventional ultrasound is also advantageous in managing first trimester pregnancy loss by aiding in removing retained products of conception especially in the case of uterine anomalies. These cases are either managed expectantly (no intervention), medically, or surgically. One study has determined that expectant management led to a higher risk of incomplete miscarriage, need for unplanned (or additional) surgical evacuation of the uterus, bleeding and need for transfusion. Dilatation and curettage (D&C) is the accepted procedure for surgical management.

When dilation suction and curettage is performed without the use of ultrasound, the procedure carries the risk of complications such as hemorrhage, infection, perforation and retained products of conception (RPOC). Current estimates of the general rate of complications range from 1.4% to 8.4%. The incidence of RPOC after first-trimester termination of pregnancy (TOP) has been reported as 1-3%. As RPOC and uterine perforation are major complications of uterine evacuation, it has been suggested since the 1980s that the use of ultrasound intraoperatively may be of great value in unusual or difficult cases such as acute uterine retroflexion or anteflexion, distorted uterine anatomy or cervical stenosis. In spite of the wide acceptance of ultrasound in gynecology, however, only a few authors have reported its routine use during surgical evacuation of the uterus or following its completion in the first trimester of pregnancy. A study conducted in 2006 demonstrated that post-operative ultrasound guidance of first trimester dilatation and curettage may lead to decreased incidence of retained products of conception and total complication rate.

The purpose of our study was to determine if ultrasound guidance during and/or after first trimester dilatation and curettage would decrease the incidence of complications including retained products of conception, hemorrhage, infection, or uterine perforation.

Objective

To determine whether the use of real time ultrasonographic (US) guidance during a uterine aspiration or suction dilatation and curettage (D&C) for surgical treatment of spontaneous abortion (SAB) or retained products of conception (RPOC) decreases the risk of complications.

Study Design and Method

We performed a retrospective chart review of a total of 1499 charts from Truman Medical Center (710 cases from Hospital Hill and 789 cases from Lakewood) that underwent a D&C from July 1, 2005 through June 31, 2017. From these 1499 cases, 128 cases were excluded from the study since these did not meet our indication criteria for either a spontaneous abortion or postpartum retained products of conception. From a total of 1371 D&C cases for either SAB or RPOC, a total of 1212 cases did not use US guidance (control group) and a total of 159 cases used US guidance (exposure group).

The variables will be the aforementioned outcomes: Type of D&C (traditional vs. US-guide), estimated blood loss (EBL), emergency room visit within 30 days, complications associated with D&C including incomplete evacuation, or uterine perforation.

Results and Discussion

To determine whether the use of real time ultrasound guidance while performing dilation and curettage does not lower the risk of post-operative complications requiring emergency department visits or admission to the hospital within the first 30 days after the procedure.

• The use of real time ultrasound guidance while performing dilation and curettage does not lower the risk of intra-operative complications including uterine perforation or retained products of conception.

• There is an unknown relationship between ultrasound guided D&C and estimated blood loss and it is not clear if this demonstrated increase in blood loss is due to ultrasound use during the procedure.

Conclusions

Recommendations

• Either ultrasound guidance vs traditional technique can be used during a suction dilation and curettage with no increased risk in intra-operative complications such as uterine perforation of RPOC.

• Ultrasound guidance had not been shown to lower the risks of post-operative complications including uterine infection and therefore is not the preferred method for performing suction dilation and curettage over traditional methods.

References


Acknowledgements:

Thank you to Hollie McKinney, LPN; Gwen Sprague, MLS and An-Lin Cheng, PhD for their help with this project.
Smartphone Games and Depression

Background

Mental Health is an area in our society that has stigma that creates barriers that hinders patients from getting the care that they need. Depression is an interesting mental illness that has a social stigma to it that entices patients and their families to believe that if they just did more and tried harder they would be able to “get over” their depression. Unfortunately it has not been seen to be that easy. Antidepressant prescribing has been something that has been at a pretty high rate. We have many modalities that have been proven to aid in one’s mental health both pharmacologic and nonpharmacologic but one common barrier to these interventions is a financial barrier. The patient population that I work with is met with financial barriers on a daily basis so I wanted to find an intervention that could accommodate and move past that barrier. Many individuals have smartphones regardless of socioeconomic status and many smartphones allow applications like games. There have been studies in teens and elderly showing improvement to mental health from playing games on a regular basis. I want to see how applicable this is in relation to depression by first understanding the interest of patients that would use smartphone games as an aid.

Objective

Understanding if there is interest in adults over the age of 18 with the diagnosis of moderate to severe depression in using smartphone games as an aid to their antidepressant care.

Methods and Materials

Patient population was from the Family Medicine clinic.

If someone scores 10 or above on the PHQ-9 questionnaire, and is over the age of 18 I asked them if they would be willing to participate in the study. It is standard of care to check birth dates to confirm patients in the clinic so we will already have this knowledge as part of a regular standard of care visit.

If they express interest, the patient was given an informational sheet to read over and I would be present to answer any questions. If they agree to participate, the subject will be given a questionnaire that contains no identifiers. The questionnaire had questions about their age, gender, race, do they have a smartphone, and if they are interested in using smartphone games to aid in their mental health. The patient gave the questionnaire back to Dr. Stokes and that is the end of the procedures.

We collected no identifiers. All patients will be in a private clinic room during the visit. The questionnaire will have no PHI on the form and the data from the form will be entered into a electronic excel file and then shredded. The electronic file will be kept on a password protected file on Dr. Stokes computer and he will be the only one to have access to this file. He will delete this file at the end of the study.

The purpose of the study is to gauge the interest of patients with moderate to severe depression of using smartphone games for their mental health. We are focusing on the population at TMC LW Family Medicine clinic to better understand our patient’s interest and possibly a future pilot study.

Results and Discussion

**GENDER**

<table>
<thead>
<tr>
<th>Frequency</th>
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</tr>
</thead>
<tbody>
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</tr>
<tr>
<td>Male</td>
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<td>33.3</td>
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<td>Total</td>
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<tr>
<td>Total</td>
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**SMARTPHONE**

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<tr>
<td>Total</td>
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**INTENT**

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<td>83.3</td>
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<td>2</td>
<td>16.7</td>
</tr>
<tr>
<td>Total</td>
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<td>100.0</td>
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**DESCRIPTIVE STATISTICS**

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<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
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<tr>
<td>12</td>
<td>18.00</td>
<td>62.00</td>
<td>35.987</td>
<td>11.97314</td>
<td></td>
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<tr>
<td>Valid N (listwise)</td>
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<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Acknowledgements

I would like to thank Gwen Sprague, MLS, Dr. Lindsay Fazio, Hollie McKinney, LPN, Dr. Huffman, Dr. G. Stokes and Dr. Neisen for their help in this project.

Conclusions

Though there was a limited sample size, there were some interesting observations derived from the data. 2/3 of the sample size were female. 2/3 of the patients were white. ½ of them were black. All of them owned a smartphone and 83% of them were willing to use smartphone games for their mental health. Age range of the patients was between 18-62. Average age was 36.

Based on the articles I have read in preparation for this research project, the results of the questionnaire matched my hypothesis that most people would be interested in using smartphone games to aid in their mental health, specifically their depression.

Recommendations

• This project sparked a few of recommendations to consider for further study
  • The first would be to have more people take the questionnaire to get more information on the interest of using smartphone games for their mental health
  • Secondly, it would be great to actually see if smartphone games make a difference in PHQ-9 scores in comparison with standard of care and if so, by how much of a difference does it make. Also it would be interesting to assess if the type of game has any impact on one’s PHQ-9 scores.

References


Background

Birth Tourism is the planned birth of a child by a foreign mother who seeks birthright citizenship for her neonate. This phenomenon has significantly increased over the last five years and is presenting challenges to the medical community. The purpose of this study is to gather more clinical data on this population in order to create guidelines to provide improved care and outcomes for these patients.

Definition of Birth Tourism:

“The planned birth of an infant in the United States by a visiting alien mother who seeks birthright citizenship for the baby; typically she and the baby leave the country after the birth, but the child can return at any time in the future, and years later can set in motion the legal immigration of his or her parents and other family members.”

Population Demographics:

- Estimated prevalence is 36,000 women annual, but grossly underestimated
- Countries of Origin: China, Taiwan, Nigeria, Turkey, Russia, Mexico, North and South Korea, Brazil
- Average age of 35 years older than average pregnant women
- Uninsured/self-pay
- Most purchase maternity packages
- Common goal of U.S. citizenship for child
- Cervical cancer screening uptake is poor

Objective

To complete a retrospective pilot study to determine: How prevalent is birth tourism at Truman Medical Center Lakewood (TMC-LW) and how do the demographics and outcomes of this population compare with randomly selected non-birth tourists also cared for at TMC-LW?

Study Design and Method

Study Design:

This was a retrospective 3-year study of EMR data. Information was collected from birth records at TMC-LW spanning from August 2014 – August 2017. Birth Tourists were identified and were compared to a Control Group selected from the same time period.

Study Population:

Selected women and their neonates were selected who met criteria for birth tourism including non-US citizen, traveling from different country and returning back to country of origin after the birth of their neonate.

Method:

Birth Tourism patients and their neonates were de-identified. Pertinent demographic information was collected as well as prenatal, perinatal and postnatal information and outcomes of neonates. This information was compared to a similar, randomly selected non-birth tourism group as the control group.

Acknowledgements:

We would like to acknowledge the following people who helped make this research project possible:

- Hollie McKinney, LPN, Research Coordinator, Department of Community & Family Medicine, Truman Medical Center Lakewood
- An-Lin Cheng, PhD, Director of Research and Statistical Consult Service, Department of Biomedical and Health Informatics, UMKC School of Medicine
- Clinical Medical Librarian, Medical-Dental Library, Truman Medical Center Lakewood

References


Conclusions

Birth Tourists who delivered between August 2014 – August 2017

- More likely to be older, to present later for OB care and to have a later initial ultrasound
- Twice as likely to have had a previous cesarean section

The neonates of the Birth Tourists

- More likely to have lower 1 min Apgar scores, to be breastfed, and to have Sickle Cell trait
- Less likely to be exclusively formula fed, indicating greater maternal intention to breastfeed

NICU admissions were higher in the BT group

- This did not reach statistical significance due to low numbers, but remains a red flag for this population and should be studied more.

Recommendations:

- Identify and establish reliable communication links with Birth Tourists early
  - At initial prenatal visit, connect them with a dedicated social worker
  - Take advantage of social networks such as Facebook messaging, Linked In and What’s App for patients who have cell phones but no US mobile provider. Prove these contact methods while patient is available in clinic or hospital.
  - Work with referral networks to identify and communicate with these patients BEFORE they come to the US to provide information such as scheduling a New OB Visit, prenatal records to bring, and financial considerations.

- Establish standard routines for caring for birth tourists
  - Create a special OB checklist for Birth Tourists, to be started at New OB Visit.
  - Perform a PAP smear on all Birth Tourists at their New OB Visit, so that results may be available prior to departure.
  - Schedule earlier follow up appointments for Birth Tourists and their neonates, with a combined postpartum visit and Well Child Check 1 month after delivery. This will allow for proper follow up as New Born Screening and weight checks for the neonate, and PAP follow up and postpartum visit for the mother prior to departure.

- Improve the ability of providers to care for birth tourists
  - Educate OB Providers on Birth Tourism and special considerations and care needed in this population.
  - Designate Birth Tourism at our institution for the purpose of improved maternal and neonatal outcomes.
  - Create a “Clearance for Travel” form to be completed by provider at postpartum visit/WCC for the mother and her neonate.
  - Further research should be performed on this population in order to create “Best Practice” guidelines for Birth Tourists and their neonates.

Table 1: Birth Tourist Demographics, * = Statistically Significant, *** = P-value not calculated

<table>
<thead>
<tr>
<th>Category</th>
<th>BT (N=31)</th>
<th>Control (N=31)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gestational age at Birth (weeks)</td>
<td>39.87</td>
<td>39.57</td>
<td>0.3497</td>
</tr>
<tr>
<td>1-min Apgar score</td>
<td>2.38</td>
<td>1.14</td>
<td>0.071*</td>
</tr>
<tr>
<td>Maternal Apgar score</td>
<td>8.02</td>
<td>7.96</td>
<td>0.132</td>
</tr>
<tr>
<td>Birth Weight (gms)</td>
<td>2512</td>
<td>3494</td>
<td>0.047*</td>
</tr>
<tr>
<td>Rate of C Section</td>
<td>12.2%</td>
<td>9.9%</td>
<td>0.576***</td>
</tr>
<tr>
<td>RLOCS Rate (%)</td>
<td>15.30%</td>
<td>10.1%</td>
<td>0.491</td>
</tr>
<tr>
<td>NICU admissions</td>
<td>1</td>
<td>1</td>
<td>0.386</td>
</tr>
<tr>
<td>Breastfeeding exclusively</td>
<td>27</td>
<td>3</td>
<td>0.001***</td>
</tr>
</tbody>
</table>

Figure 1: Most Common Countries of Origin of Birth Tourist in the US

Figure 2: Form of Payment

Table 2: Birth Tourist Outcomes, * = Statistically Significant, *** = P-value not calculated

<table>
<thead>
<tr>
<th>Category</th>
<th>BT (N=31)</th>
<th>Control (N=31)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gestational age at initial US (weeks)</td>
<td>12.18</td>
<td>16.18</td>
<td>0.001*</td>
</tr>
<tr>
<td>Gestational age at initial visit (weeks)</td>
<td>4.25</td>
<td>13.18</td>
<td>0.001*</td>
</tr>
</tbody>
</table>

Figure 1: Country of Origin

Figure 2: Form of Payment
ABSTRACT

The goal of this research study was to attempt to build teamwork and leadership skills in residents utilizing a yearly overnight Family Medicine resident’s retreat. All levels of training, PGY-1, PGY-2 and PGY-3, were included and participated.

BACKGROUND

Traditional residency training is highly geared towards building academic achievement over building leadership and teamwork skills. However, the ACGME is working to improve these skills as healthcare is a team profession with continued reliance on these skills.

OBJECTIVE

The objective was to attempt to use the existing resident retreat in the UMKC Family Medicine program to build skills in teamwork and leadership.

METHODS

This was a nonrandomized trial that included Family Medicine residents PGY1 to 3 who are in training at the UMKC Family Medicine Residency. Participation in the study was optional. However, interventions were attended by all residents, regardless of participation in the study.

Pre-Intervention

Residents completed a pre-intervention 7 question survey using a 5 point Likert scale in which they gave their baseline level of comfort bringing conflicts between residents, residents and nurses and residents and faculty. They were also asked how well-equipped they felt handling the stress of residency as well as what percentage of their fellow residents they felt comfortable working on a team with and leading.

Intervention

The residents then participated in a yearly retreat with curriculum geared at developing teamwork and leadership skills including conflict resolution, teambuilding activities and problem solving activities.

Post-Intervention

The residents filled out a post-retreat survey which included the same questions as the pre-retreat survey, plus 4 additional questions pertaining to the effectiveness of the resident retreat in achieving the aforementioned goals.

RESULTS

Overall, improvement in level of comfort was reported when pre- and post- retreat survey questions were compared in PGY-1, PGY-2 and PGY-3 classes. Individualized data was also matched, then averaged per residency class. These results were consistent with the aggregate data showing improvement in level of comfort over all fields. The greatest improvement was seen in the PGY-2 class, followed by PGY-1, then PGY-3. Efficacy of the resident retreat in building teamwork and leadership skills was also assessed, with an overall positive review. Again, the PGY-2 class showed the greatest positive impression.

CONCLUSION

In aggregate data the retreat was found to significantly improve residents’ perception of their ability to manage the stress of residency, their ability to bring up conflicts with staff members, fellow residents and attendings as well as their comfort level working on a team with their fellow residents. In PGY-1 residents, the retreat was most beneficial in improving conflict resolution skills among co-residents and staff members. In PGY-2 residents it was found to be useful in handling conflicts and stress in all categories measured. PGY-3 residents found the most benefit from areas pertaining to team management and handling stress. The overall trend of the data suggests that the resident retreat did significantly improve the residents’ perception of their stress management, conflict resolution and teamwork skills.

RECOMMENDATIONS

We recommend that the retreat be continued as it does show a significant positive impact on academic leadership and interpersonal skills. If the study were to continue, it would be beneficial to trend improvement as each residency class progresses. Further comparisons can also be made to identify specific areas of benefit to help tailor retreat activities.

Acknowledgements: Dr. Beth Rosenbarg, Hollie McCreary, LPN and Gwen S. Sprague, MLS
Error Rate in Electronic Medical Record Data in Employees of a Community Hospital

Methods and Procedure for Data Collection:

Errors abound in the Electronic Medical Records we use daily and many of these are not benign. (Koppel, 2009) Lara Pullen, in an online Medscape article reporting from the American Academy of Ophthalmology’s 2014 Annual Meeting on an investigation that found less than half of the electronic medical records were complete and free from errors (Pullen, 2014).

Healthcare does not have embedded systems of data entry validation and reconciliation—unlike banking, logistics, and other businesses. Recent legislation has encouraged and actually rewards eligible providers to perform medication reconciliation with each face-to-face encounter, but has no reward mechanisms to underwrite the cost of reconciling diagnoses, problem lists, weights and measurements, clinical notes, and the hundreds of other components of the EMR that rely on human data entry.

We are beginning to see the importance of accurate information in the medical records as we migrate from a volume to a value-based reimbursement system. In value-based systems, existing diagnoses and problem lists are being used to drive quality measures that have direct repercussions on healthcare reimbursement.

Patient engagement is a critical component of health and disease management. (Coulter, n.d.) A key component to improving patient engagement is access to the medical record through tools like the patient portals that are now required by CMS for providers and hospitals participating in Medicare and Medicaid EHR Incentive Programs. Dr. Prashita Dullabh, showed that patients can be effectively engaged to provide accurate and reliable online feedback to improve their quality of EHRs. (Dullabh, n.d.) This raises the question: Can we engage the patients to undertake the arduous task of data verification and management of their own records?

This study is designed to engage the patients at TMC-Lakewood who are clinically trained (nurses, physicians, therapists, etc.) who already have access to the medical record to help reconcile, validate and update the medical record. It seeks to answer the question: can patient direct access and management of their own record improve the accuracy and reduce the cost of maintaining an accurate medical record?

Study Design and Method

This project used a retrospective chart review model to address the specific research question.

Study Population: This study utilized chart data from employee-patients active on the patient portal system of a community hospital.

Methods and Procedure for Data Collection:
- Review each section of the chart from demographics through notes
- Record every error instance in detail
- Categorize the errors

Anticipated Problems:
- Current policies discourage access of individuals to their own records
- HIPAA misinterpretations
- Defined EHR roles may prevent patients from performing certain
- Leadership resistance

Outcomes Data: Number and type of errors both in aggregate and by chart.

Results and Discussion

Number of Errors By Chart

Error Type

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
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<tbody>
<tr>
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<td>50%</td>
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Errors by Type (All Error)

<table>
<thead>
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<th>Category</th>
<th>Number</th>
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<tbody>
<tr>
<td>Problem List</td>
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</tr>
<tr>
<td>Allergies</td>
<td>1</td>
</tr>
<tr>
<td>Family History</td>
<td>12</td>
</tr>
<tr>
<td>Past Surgical History</td>
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</tr>
<tr>
<td>Demographics</td>
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<tr>
<td>Medications</td>
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<tr>
<td>Social History</td>
<td>10</td>
</tr>
<tr>
<td>Pregnancy History</td>
<td>3</td>
</tr>
<tr>
<td>Immunizations</td>
<td>1</td>
</tr>
<tr>
<td>Health Maintenance</td>
<td>3</td>
</tr>
</tbody>
</table>

Conclusions

Errors of commission (incorrect information was entered) were as common as errors of omission (information not entered).

Active reconciliation of multiple sections of the chart with the study participant present was effective method for identifying errors in the medical record.

Every chart reviewed had errors of varying type and magnitude. The most common type of error overall was in the Problem List, but the most common severe errors were in Family History.

The most common sources of error were inaccurate problem lists, family histories, demographics, and medication lists.

It is the responsibility of both patient and providers to ensure accuracy in documentation.

Recommendations

Dedicated time should be given yearly to active reconciliation of the EHR in order to improve error rates—which is likely to have an effect on both quality and cost.

Patients should be encouraged and given the option to be active participants in the management of their medical information.

Areas of further study would be to randomize participants into self-managed and clinician managed charts and to compare error rates after a given amount of time.

Bibliography


Acknowledgements

Many thanks to Hollie McKenzie, LPN, Gwen E Sprague, MLS, and all the employees who agreed to participate in our study.
Background

Type 2 Diabetes is a challenging global health concern. About 1 in 10 people suffer from the illness. It is the 6th leading cause of death in males and 7th leading cause of death in females. Diabetes increases the risk of heart disease and stroke. There is strong evidence to support sugar-sweetened soft drinks contribute to the development of diabetes and may worsen diabetic control. People who consume sugary drinks regularly (1-2 cans per day) have a 26% greater risk of developing type 2 diabetes. They are also 25% more likely to have difficulty controlling their blood sugar. Improved diabetic control can reduce the risk of diabetic complications. Healthy lifestyle changes including regular exercise and weight loss can also reduce risks of adverse outcomes and increase diabetic glucose control.

Objectives

The purpose of this study encourage a sustainable lifestyle modification that can improve diabetic control. Specifically the investigators will study the effect upon A1c levels by eliminating soft drinks and from the diet of poorly controlled diabetes and sending regular text messages encouraging adherence.

Methods

- Study population: Adults with uncontrolled diabetes, with A1c greater than 7 but less than 13, pooled from two co-principal investigator’s patient panels.
- Patients were encouraged to abstain from soft drinks as defined below and return to clinic in 2-3 months for repeat A1c.
- Text messages were sent (3/9, 4/3, 4/23) to participants encouraging adherence.

Inclusion Criteria

- Active opt-in
- Working cell phone number, ability to receive text messages
- Currently drinking any type of soft drink at least twice a week

Exclusion Criteria

- Type 1 diabetes
- Controlled type 2 diabetes
- No consumption of soft drinks

Results

<table>
<thead>
<tr>
<th>Results - Qualitative positive, negative or neutral, (change in A1C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Did you drink Soda over the last 2 months? If so how many times?</td>
</tr>
<tr>
<td>- Diet soda once in a while about 1 time per week (-1.0)</td>
</tr>
<tr>
<td>- Prior 4 cans per day, continued drinking soda the first 3 weeks then completely stopped (-1.2)</td>
</tr>
<tr>
<td>- Prior 1-2 sprites/day, switched to 2 tsp/glass once study started (-2.7)</td>
</tr>
<tr>
<td>- 3 small sodas over the last 3 months (unchanged)</td>
</tr>
<tr>
<td>- Prior 1-2 sodas/month, none since starting study (-0.4)</td>
</tr>
<tr>
<td>- Yes, daily (unchanged)</td>
</tr>
<tr>
<td>2) Did you find the text messages</td>
</tr>
<tr>
<td>- Yes. Good reminder (-1.0)</td>
</tr>
<tr>
<td>- Yes. Reminder &amp; encouraging, intervals were appropriate (-1.2)</td>
</tr>
<tr>
<td>- Yes. Reminder &amp; encouraging. (-2.7, -0.4, unchanged)</td>
</tr>
<tr>
<td>- No (unchanged)</td>
</tr>
<tr>
<td>3) Would you use more forms of social media for support? Could you provide some examples?</td>
</tr>
<tr>
<td>- No: Prefers texting without interaction from other members in the group</td>
</tr>
<tr>
<td>- No, I do not use social media</td>
</tr>
<tr>
<td>- Yes. Pinterest, group messaging</td>
</tr>
<tr>
<td>- Unsure. Maybe Fit Bit.</td>
</tr>
<tr>
<td>- No, because I do not like to participate in social media</td>
</tr>
</tbody>
</table>

Conclusions

- Physician encouragement for uncontrolled diabetics to eliminate soft drinks positively resulted in lifestyle modification.
- Patients had a positive opinion regarding texting as a form of communication.
- Simple diet modifications can be effective at lowering HgA1c.
- Communicating with patients regularly through text messaging empowered and encouraged patients to take a more active role in their diabetic management.

Limitations

- We had 6 patients complete both pre and post-A1C, therefore decreasing the power of our study (only 13 actually met our inclusion criteria).
- Patients are aware they are being studied and may be more compliant.
- Recall bias regarding the amount of soft drinks reported by participant.
- Intervention duration was limited to 2 months

Future Directions

- Extend study to a large sample size to increase power and validity of results.
- Consider group management, where patients may interact and encourage one another.

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Acknowledgements

Many thanks to our faculty advisor, Dr. Anne Arey for her support & guidance. Hollie McKinney, LPN for assistance in coordinating our research. Green E Sprague, MLS for assisting with graphic design. Dr. David Voran for IT assistance.

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The primary objective is to determine the effectiveness of meeting exercise goals for patients that participants were followed up at 30 day and 60 day intervals via telephone to monitor the their house that is frequented to be used as a reminder. After this initial face to face visit the their exercise goals utilizing the book. They were also instructed to place the book in an area of written. In explanation of the My Habit Book the participants were shown how they can track 2 months. If selected to the education and My Habit Book group participants were educated in interviewing techniques participants were then asked what their exercise goals were for the next every day”. From this, it appears that goals are more likely to be reached if they are more specific. Even so, there can be a high patient failure rate to implement physician recommendations. Wai Lee MBA, UMKC Henry W. Bloch School of Management, has addressed this issue by developing a small flipchart booklet called My Habit Book to help patients in goal setting and measurement.

No book group:
- baseline average # of days of exercise per month = 1.0
- After 1 month, the average # of days of exercise increased to 2.25 days
- After 2 months, the average # of days of exercise maintained stability at 2.25 days

Book group:
- Baseline average # of days of exercise per month = 2.2 days
- After 1 month, the average # of days of exercise increased to 10.8 days
- After 2 months, the average # of days of exercise decreased to 6 days

Making Healthy Lifestyle Changes using My Habit Book

As early as 1981, researchers highlighted the substantial preventability of cancer by changing lifestyle factors. Evidence indicates 30% to 60% of cancers are preventable by avoiding tobacco, a healthy diet, regular physical activity, and controlling weight (D. B. Blodgett, MD 2016). This suggests overall complex weight control interventions may not be needed to alter patient behavior. Based on the above discussion, it appears that patient habit and lifestyle changes recommended by physicians are an effective way to change behavior to reduce incidence rates of cancer, obesity and related comorbidities. Considerable research has been done on factors that contribute to successful lifestyle changes and more effective tools to counsel patients on adopting healthier habits. However, even a cursory literature review indicates a high failure rate of patients when trying to change unhealthy behaviors over time. B.J. Fogg, Harvard Women’s Health Watch 2007 et al. has indicated that failure often results from physicians giving non-specific goals such as “get more exercise” rather than “walk 20 minutes every day”. From this, it appears that goals are more likely to be reached if they are more specific. Even so, there can be a high patient failure rate to implement physician recommendations. Wai Lee MBA, UMKC Henry W. Bloch School of Management, has addressed this issue by developing a small flipchart booklet called My Habit Book to help patients in goal setting and measurement.

The primary objective is to determine the effectiveness of meeting exercise goals for patients that receive counseling vs those that agree to counseling use My Habit Book to track exercise goals.

The study was a randomized controlled study including patients from the Family Medicine Center. Inclusion criteria included patients seen in the Family Medicine Center at Truman Medical Center Lakewood and were willing to participate in a study on changing lifestyle habits, specifically exercise. Exclusion Criteria includes patients that are unable to provide informed consent or anyone without a working telephone or unable to provide telephone number for follow up. After patients were selected as participants in the study they were randomly assigned to either receive education on exercise or to receive education on exercise in addition to the My Habit Book. If selected to the education only group participants were educated about the benefits of exercise on their healthy and given paper information from WHO and CDC. Utilizing motivational interviewing techniques participants were then asked what their exercise goals were for the next 2 months. If selected to the education and My Habit Book group participants were educated in the same way as the exercise only group and then asked what their exercise goals were for the next 2 months. They were then given the My Habit Book and a prescription for exercise was written. In explanation of the My Habit Book the participants were shown how they can track their exercise goals utilizing the book. They were also instructed to place the book in an area of their house that is frequented to be used as a reminder. After this initial face to face visit the participants were followed up at 30 day and 60 day intervals via telephone to monitor the accomplishment of their exercise goals. Data were analyzed in excel using the t test to calculate P values.

The null hypothesis states that when a physician discusses a patient’s health status and provides a My Habit Book with mutually agreeable specific goals, the patients will not report a clinically significant change in behavior.

No book group:
- baseline average # of days of exercise per month = 1.0
- After 1 month, the average # of days of exercise increased to 2.25 days
- After 2 months, the average # of days of exercise maintained stability at 2.25 days

Book group:
- Baseline average # of days of exercise per month = 2.2 days
- After 1 month, the average # of days of exercise increased to 10.8 days
- After 2 months, the average # of days of exercise decreased to 6 days

Conclusions

The results were not statistically significant.
- One month change p value was 0.189
- Two month change p value was 0.536

But the positive trend with receipt of the Habit Book is encouraging. Another study with a larger sample size may show significant results. We would encourage practitioners to explore low tech ways to encourage their patients to incorporate exercise into their daily routine.

Recommendations

- Use of low tech affordable reminders aid in making lifestyle changes and can be offered to patients, especially those who are motivated
- Exercise education should be offered to patients at regular intervals.
- Motivational Interviewing is a key component in making lifestyle changes and should be utilized in educating patients about lifestyle changes.
- Physician and staff should be educated on motivational interviewing to better counsel patients on making lifestyle changes such as exercising.

Study Design and Method

The primary objective is to determine the effectiveness of meeting exercise goals for patients that receive counseling vs those that agree to counseling use My Habit Book to track exercise goals.

Acknowledgements

This project was made possible by the contributions of Hollie McKinney, LPN, Gwen E Sprague, MLS, Dr. David Voran, and the UMKC Research Department.

Bibliography

Changing Resident Workflow: Chronic Pain and Depression

Lauren Carpenter, MD, MDiv

Background
In 2016, the Centers for Disease Control (CDC) published guidelines on chronic opioid prescription with recent physician arrests and an epidemic of deaths from opioid use. A 2016 Annals of Family Medicine study demonstrated, in three large populations, that the risk of new onset depression increases with continuous use longer than 30 days. The United States Preventive Services Task Force (USPSTF) already has a level B recommendation for yearly screening of all patients for depression, most commonly performed with a Patient Health Questionnaire (PHQ). The University of Missouri Kansas City (UMKC) Family Medicine Clinic (FMC) sees approximately 90 patients with chronic pain each month and performs a similar number of PHQ surveys per month.

Methods
Using a retrospective chart review of FMC patients seen in October 2017, the patients with a primary diagnosis of chronic pain or low back pain were identified using Cerner PowerChart Explorer Menu reports. In a similar fashion, patients with a PHQ score were also identified and a comparison made to identify the rate at which PHQ surveys were being performed on patients seen primarily for chronic pain. An EHR tool was developed and a brief educational session provided to the UMKC family medicine residents. After one month, repeat analysis was run identifying the rate at which PHQ surveys were now completed by patients with a primary diagnosis of chronic pain.

Results

Pre-Intervention
- 1798 total FMC charges/visits Oct-Nov 17
  - 66 primary diagnosis = chronic pain (3.7%)
  - 19 pts (28.8%) had PHQ9 in the past 12 months
  - 4 pts (6.1%) had PHQ9 at their visit

Post-Intervention
- 1892 total FMC charges/visits Nov-Dec 17
  - 51 primary diagnosis = chronic pain (2.7%)
  - 14 pts (27%) in the past 12 months
  - 2 pts (3.9%) at their visit

Discussion
-Patients that did have PHQs completed were performed at visits in which they were establishing care with a provider
-PHQ9 more commonly being performed at initial visits with providers than at follow-up visits of patients with chronic pain who are seen every one to three months.
-Confounding factors: the frequency with which the EHR utilized is updated and/or changed, resident workflow routines, and the time of the resident year during which the tool was implemented. The PHQs performed for chronic pain patients were completed on establishment on care, intimating that this process is incorporated into this workflow.

Future Directions
For resident learners, having a standard way of meeting quality measures including routine PHQ for patients with a primary diagnosis of chronic pain may aid in screening this high-risk population for comorbid and new-onset depression. Currently, no electronic health maintenance recommendations or registries have been developed to remind users to do this. Additional studies would be helpful in determining the frequency of screening needed to identify and treat a significant depressive episode. After which, a registry or electronic health maintenance tool could be developed to remind providers to obtain screening PHQs at the desired interval.

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