CONFRONTING POLYPHARMACY IN CORRECTIONS: AN INTERPROFESSIONAL TEAM APPROACH

by

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Abstract

Polypharmacy is a growing community problem, and is evident in correctional healthcare. Using Lewin's Change Theory, action research, and an interprofessional team approach in this project, potentially problematic polypharmacy was identified. One hundred eighty profiles met criteria for inclusion. Eighty-six profiles were reviewed, 44 (51%) were age 50 to 78, and 42 (49%) age 26-49. Discoveries from this project support an interprofessional team approach to polypharmacy review within the correctional healthcare setting. Areas of interest identified were; allergies not documented in 41% (n = 18), medication redundancy was identified in 30% (n = 13), chronic use of nonsteroidal anti-inflammatory drugs (NSAIDs) and protein pump inhibitors in 55% (n = 47) of the total profiles reviewed. The review was beneficial in identifying problematic polypharmacy. A draft policy was developed to support a team approach for medication reviews in the correctional health care setting.

Keywords: polypharmacy, correctional health, interprofessional team, medication redundancy, aging inmate

Confronting Polypharmacy in Corrections: An Interprofessional Team Approach
Polypharmacy is a growing and nationally recognized problem that has also been
identified and has impacted the correctional health care setting (Williams & Abraldes, 2007).

Although correctional health care provides close medical support for the inmate population, there
remains an awareness that this problem exists and is especially evident within the aging
population. A compartmentalized approach, or a focus on only medications to treat a specific
disease and not the medication profile as a whole, enhances the risk of potentially problematic
polypharmacy among inmates (Williams & Abraldes, 2007). A compartmentalized approach
was not identified in this healthcare setting as evidenced by the use of a primary care model. An
interprofessional team (IPT) approach was used to review the inmate's entire medication profile.

Representatives from medicine, nursing, and pharmacy services played active roles in the team
approach to inmate medication reconciliation. The IPT addressed this safety and quality
improvement issue through the review of pharmacy data, specifically each individual patient
medication profile.

Literature Review

A systematic search of English language articles was conducted through Cumulative Index to Nursing and Allied Health Literature (CINAHL) using inclusion criteria of polypharmacy. The initial database search using CINAHL resulted in 4,513 relevant articles regarding polypharmacy. Conducting the search again with the additional inclusion criteria of older adult, resulted in 199 relevant articles. In a subsequent database search using Ovid Nursing, and the same criteria resulted in one relevant article. Using the inclusion criteria of (a) polypharmacy, (b) older adults, and (c) aging inmates; 21 articles were identified. However, only 11 met inclusion for older adult and polypharmacy relevant to aspects in confronting the

problems associated with polypharmacy within a community setting that could also be related to the correctional health care setting. There were no studies identified using the inclusion criteria (a) polypharmacy, and (b) aging inmate. Evidence was selected, reviewed, critiqued, and synthesized to identify its support of the practice change related to polypharmacy in an aging inmate. Reduction in medications was not an aspect of the inclusion criteria. Relevant studies included those supporting an IPT approach, five or more medications, potential for drug related problems, and aging patients.

Polypharmacy

Literature on polypharmacy suggests that polypharmacy is a growing problem and has the greatest impact on the aging population. Co-existing disease processes are more likely in the aging population and thereby places them at a greater risk of polypharmacy (Hayes, 2012). Although polypharmacy is not limited to the aging population, literature supports the aging population is at greater risk as a result of their co-existing medical conditions and this risk can also be identified within a correctional setting. Polypharmacy has been described as, the use of five or more medications at the same time for the same patient (Anguita, 2011). These elements of polypharmacy are evident within a correctional health care setting and are identified in an aging inmate population, as well as those ages 26-49 in some cases.

One of the main difficulties in the study of polypharmacy in a correctional healthcare setting is a lack of evidence specific to correctional healthcare (Hayes, 2012). As noted by Kaufman (2014) there are instances whereby therapeutic polypharmacy is appropriate. However, polypharmacy is not always effective or safe, and may lead to the inappropriate use of medications, poor compliance, increase cost and risk for morbidity (Kaufman, 2014). According to Kaufman (2014), four guiding principles for medication optimization must be followed. It is first necessary to understand the patient's experience with medications. Provider evidence-based

choice of medications is essential. It is necessary to ensure that the medication prescribed is as safe as possible and make medicine optimization an aspect of routine practice. As noted by Jesson (2011) there is a marked increase in the number of medications prescribed and taken by aging adults as compared with ten to 15 years ago. George and Jacobs (2011) study supported growing evidence that significant proportions of aging adults are exposed to polypharmacy and that as their number of chronic conditions increases, so do the exposures to polypharmacy.

The aging population is very susceptible to the dangers of polypharmacy (Rollason & Vogt, 2003). In Kaufman (2014), the difficulties associated with the necessity to avoid the cascading effects of prescribing was described. These scenarios can and do exist within the correctional health care setting. The movement of individuals from a community setting into the correctional system provides a route for polypharmacy related issues to be exhibited within the correctional health care setting. The similarities between community health and correctional health are supported by the relationship between the number of medications prescribed and the treatment of multiple disease processes. The number of prescribers involved in the inmate patient's care and the frequency of movement from one correctional facility to another.

Collaboration and Review

Some literature suggests interprofessional collaboration and medication profile reviews are effective interventions for polypharmacy issues. The National Service Framework for Older People recommended six-month medication reviews for aging adults over 75 who were prescribed four or more medications and this review was to be considered a minimum requirement (Jesson, 2011). Also recognized was that chronological age differed from physiological age and many adults under age 75 would benefit from medication profile reviews (Jesson, 2011). Department practice guidelines and the implementation of routine primary care provider reviews would exceed the six-month recommendation provided by National Service

Framework for Older People. The discussion related to physiological age resembles discussions related to accelerated aging in inmates age 50 and over. Anguita (2011), supports medication reviews as a method of monitoring polypharmacy in the aging adult population and noted those with four or more diagnoses, five or more medications, visiting multiple prescribers, multiple pharmacies, and the use of over-the-counter medications, herbs, or nutritional supplements puts them at greater risk. These contributing factors to potentially problematic polypharmacy are present and have been identified in the correctional health setting as evidenced by this project.

Communication

In a study by (John, Myalil, Sreedharan, Arifulla, & Shriwakar, 2012), a need for improved communication between the provider and patient was identified. There was also a need for improved nurse-patient communication and continuing education for health care providers as strategies to prevent polypharmacy. The role of the pharmacist in providing clinical guidance has been redefined; Rollason and Vogt (2003) clearly articulate the contributions clinical pharmacists can provide to physicians in increasing their knowledge about medications individually or through the use of interprofessional committees. Considering the identified literature support for using an IPT approach to polypharmacy, this project supported the need for collaboration between health care professionals in identifying and taking appropriate steps to assist in the elimination of potentially problematic polypharmacy.

Purpose

The purpose of this project was to determine if an IPT approach to medication review and the development of a related policy would reduce the potential for problematic polypharmacy, provide improvement in medication management, and demonstrate a potential for cost savings within a correctional healthcare setting.

Setting

The project was conducted in a maximum security correctional facility in the north east region of the United States housing an average daily population of approximately 1,600 adult males. At the time the profiles were collected, the average daily population of the facility was 1,487. The inmate population of this correctional facility range from age 18 to 78. The facility provides 24-hour nursing services and employs physicians, nurse practitioners, and physician assistants as primary care providers. The facility uses a primary care practice model. Nursing staff provide a variety of services within the clinical setting including, but not limited to chronic care monitoring, wellness screening, sick call services, vaccinations, emergency care, infirmary care, intake screening, and medication administration. Pharmacy services are provided on site. The pharmacy is staffed with a supervising pharmacist, pharmacist, and pharmacy aide. This facility also houses a regional mental health satellite unit and admits adult male inmates from various facilities throughout the geographic region who have acute psychiatric episodes. Approval to conduct this project was obtained from the Department of Correctional Services (DOCS) administration and research division, as well as the on-site facility health services director and administration. This project was supported by the organization's chief medical officer and the facility health services director, nursing administrator, and supervising pharmacist of the facility where the project was completed.

Methods

Using action research as a foundational model, the IPT consisting of the facility health services director, nurse administrator, supervising pharmacist, registered nurse, and myself as team leader were able to identify and recommend interventions to polypharmacy within the correctional setting. This action research model project was completed by and with insiders, those central to and familiar with the area to be examined (Holly, 2014). An aging inmate

population and the occurrences of polypharmacy within the aging community helped to support the need to investigate polypharmacy within the correctional health care setting. The most appropriate method for researching problems within correctional health care was through the utilization of those central and familiar with the area of correctional health care practice. This model allowed correctional health practitioners to address concerns where they have influence, the ability, and authority to make necessary change (Holly, 2014).

Upon implementation of this project, the team, reviewed inmate patient medication profiles that were identified as having five or more currently prescribed medications. The use of this method required a commitment to the project by all members of the team. Profiles were examined to determine the inmate patients' potential for drug-drug interaction, clinical contraindications, medication redundancy, or allergies. The team's goal was to develop a policy to guide the implementation of regular medication team reviews for inmate patients receiving five or more medications. As described by Kaufman (2014), appropriate polypharmacy is the prescribing of medications for patients with complex medical conditions or many conditions where medications provide the best results in the treatment of the disease. Appropriate polypharmacy is evident in patients with HIV diagnosis and in some cases hypertensive patients require appropriate polypharmacy, or the use of multiple medications for the successful treatment of the disease. The team discussed each of the inmate patients' current medications and the effect the regimen was expected to have on the condition(s) being treated.

The primary source of data was obtained from the inmate patient's medication profile.

Profiles were accessed by the supervising pharmacist using the departments' Correctional

Institution Pharmacy System 9 (CIPS 9). The CIPS 9 is a complete pharmacy software package
designed specifically to optimize the correctional facilities pharmacy services. This system
maintains a complete pharmacy database from central pharmacy operations to inmate patient

medication profiles. During this project, inmate patient identifiers were redacted from medication profiles, eliminating the potential for any bias related to a team members' prior knowledge of the inmate patient. The lack of any identifiers was also problematic, as will be discussed later. The inmate patients' date of birth (DOB) was used to determine which inmate patient age range the profile belonged. Medication profiles were separated into two groups, those 18-49 and 50–78. Medication profiles of inmate patients receiving five or more medications were included. Data collected was compiled on a data collection tool. Since the most valid source is a primary source, the pharmacy generated medication profile is the most valid and reliable source of information for this project. The medication profile generated by the pharmacy was the most useful because it provided a consistent measurement related to the number of medications prescribed for each inmate patient. The IPT met weekly over a one-month period. The average meeting duration was approximately two hours. During each meeting at least 20 medication profiles were reviewed.

Kurt Lewin's Change Theory was the theoretical framework used for this project (Butts & Rich, 2013). As Lewin's theory applies to this project, the unfreezing stage is associated with the current prescribing practices that are not inclusive of any process for the review of medication profiles. The unfreezing stage will involve a change in practice by providers that will increase their awareness of inmate patients who have been prescribed 5 or more medications. In the second stage of Lewin's theory, moving will be related to the change from no medication profile review to the use of an IPT approach for reviewing medication profiles. In the final stage of Lewin's theory, the refreezing phase will be at the time the new practice is accepted and incorporated into the standard practice of the facility and organization. Refreezing is the return to a dynamic force field and new state of equilibrium (Butts & Rich, 2013). Considering health services staff, medical, and nursing professionals as a group within the correctional organization,

the leadership demonstrated through an IPT to monitor and review polypharmacy will be the force to move the facility and organization toward this practice change. Lewin's work set standards for group issues in organizations (Butts & Rich, 2013).

Results

The results of this project support the use of an IPT approach in reviewing inmate medication profiles. The focus was to identify potentially problematic polypharmacy through the use of nursing, pharmacy, and the primary care provider. As a result of the quantitative and qualitative results of this project, the team developed a policy that establishes a team approach for implementation of a review process of medication profiles at primary care provider visits.

Quantitative Results

A total of 180 profiles were identified as meeting the defined criteria for polypharmacy and inclusion in the project. The median age of inmates was 57.5 years. Fifty-one percent (n= 44) of the profiles reviewed were of inmates 50 years and older, 49% (n = 42) were inmates 26-49 years (Table 1. & Figure 1).

Of the 180 profiles identified as meeting criteria, the team reviewed 86 (48%) profiles. Focusing on the aging inmate or those age 50 and older, 44 profiles were included in this age range. The IPT, using the data collection tool provided focused on drug/drug interaction, medication redundancy, clinical contraindication, and allergies. Interestingly, more than half of the total profiles reviewed 55% (n = 47) showed unusually long term use of NSAIDs and Protein Pump Inhibitors (PPIs). This was discovered by the supervising pharmacist and physician team members, who expressed a concern related to the long term effects of using both categories of medications. The team agreed that this was a potential problem that should be discussed further.

Primary areas of concern discovered were that of medication redundancy with 30% (n = 13) of the profiles demonstrating use of NSAIDs and Neurontin or H2 blockers with PPIs, and in

41% (n = 18) of the profiles there were no identified allergies or documentation that the inmate was without allergies. Further team investigation in this area resulted in a discovery that not all inmate information had migrated from the previous pharmacy system into the system currently being used to generate the medication profiles. Although, this was positive from a clinical aspect, the discovery implied that there was a potential software information migration problem.

Somewhat alarming initially was that 70% (n = 31) of the inmates had more than one prescribing provider, in a facility that followed a primary care model. The team investigated further and noted that 68% (n = 30) of the inmates identified with more than one provider had a mental health provider, dental provider, or a provider that prescribed in the absence of the inmate's primary care provider. This finding supported the facilities position on the use of a primary care model and inmate patients having a limited number of providers. Only 2% (n = 1) of the inmates identified had multiple prescribers involved in primary care. Of interest, but not specific to potentially problematic polypharmacy was 34% (n = 15) of this cohort were dual diagnosed medical and mental health diagnosis. The teams' investigation also revealed 84% (n = 37) of those 50 and older were prescribed 5-10 medications and 16% (n = 7) were prescribed 11 or more medications. As compared to a community setting where 47% of patients on admission used 5 or more medications (Viktil, Blix, Moger, & Reikvam, 2006). Those identified with the potential for drug/drug interactions and clinical contraindication occurred in less than 1% (n = 4) of the profiles reviewed. (Table 2.& Figure 2)

Qualitative Results

Following the teams' assessment of each inmate's medication profile and review of findings it was determined that the process was beneficial. As noted by the team, the process played an important and useful role in noting and potentially substantially decreasing problematic polypharmacy, through a regular medication profile review process that promotes

the participation of each member of the IPT.

Team members collaborated on a policy that would promote a team approach, while not being cumbersome through the creation of additional meetings. The IPT supported a policy that promoted medication profile review at primary care provider visits and the continuation of a team approach in the review process. The draft policy was presented to the chief medical officer for review who subsequently presented the policy to regional and central office staff for review. The policy was supported by the chief medical officer who recommended implementation following the divisions normal policy review process.

The final draft policy recommended the nurse administrator initiate the medication profile review process by providing the pharmacist with a list of primary care provider visits that were to be scheduled. The list will be provided to the pharmacist 48-72 hours in advance of the inmate's primary care provider visit. The preferred lead time identified by pharmacy staff was 72 hours and this was agreed upon by members of the team. This would allow appropriate time for the pharmacist to review each profile and make recommendations on those profiles having five or more medications. Profiles defined as meeting criteria for polypharmacy are then returned to the nurse administrator who will forward the profile to nursing staff assigned to each primary care provider. Nursing staff will review each profile and supply any related nursing information that is pertinent to the medications prescribed (blood pressures, finger stick results, peak flow/asthma assessment). The medication profile and related materials are attached to the front of the inmate's medical record and provided to the primary care provider (PCP) prior to the inmates scheduled visit. The primary care provider will review the medication profile, pharmacists' recommendations, and information provided by nursing staff. The PCP will document in the ambulatory health record (AHR) that the medication profile was reviewed and document any other information appropriate and related to that PCP encounter with the inmate.

During the visit the PCP will access CIPS and ensure that allergies have been appropriately entered. The medical record, medication profile, and related materials will be returned to nursing staff for handling as per department guidelines. Medication profiles will not be added to the medical record.

In complying with the department's chronic care guidelines, the team recognized that inmate patients with 10 or more medications would be reviewed at more frequent intervals. The team also recommended any cases of potentially problematic polypharmacy be discussed at the health services unit quarterly quality improvement (QI) meeting and be presented as an ongoing QI project. The impact of this process on cost for the organization would only be accurately demonstrated through practice. It was recognized by the IPT that several medications could potentially be discontinued or the inmate patient prescribed other forms of the medication at significantly less cost. Any reduction in medications especially the unusually high use of NSAIDS and PPIs would result in cost savings.

Discussion

The purpose of this project was to determine if an IPT approach to medication profile review would reduce the potential for problematic polypharmacy, provide improvement in medication management, and demonstrate a potential for cost savings within the correctional healthcare setting. Potentially problematic polypharmacy has been identified as is a growing and nationally recognized problem that has also impacted the correctional health care setting (Williams & Abraldes, 2007). It was the goal of the IPT to not only identify potential problems, but also to make recommendations that would improve medication management of the inmate patient.

Although the team identified instances of clinical contraindications and the potential for drug/drug interactions, of greatest concern was in the areas of medication redundancy and

allergies (Table 2.). During this aspect of the project the team identified medication redundancy in 30% (n = 13) of the profiles reviewed. However, team members determined that without the patient's medical record and history the true extent of medication redundancy could not be confirmed. Regarding 41% (n = 18) of the profiles not having confirmed or documented allergies, this was related to a change in pharmacy software and this information did not migrate from one correctional institution pharmacy system to the new system. This was a significant finding and was shared with the organizations central pharmacy supervisor. Use of NSAIDS and PPIs were identified and noted as being prescribed for extended periods (Table 2). IPT members were concerned with the potential adverse effects and overall effectiveness from the continued use of medications from both categories when prescribed for extended periods. It was the collaborative decision of the team that this specific area of prescribing practice would warrant further review by the facility pharmacist and facility health services director.

The consensus of the team was that the IPT approach to medication profile review was beneficial for the patient, facility, and organization. Potential problems were identified and interventions as deemed necessary were recommended or implemented. Medication management would improve with review of medication profiles using a team approach prior to each inmate patient primary care provider visit, as evidenced by the discoveries made by this IPT project. Monitoring and management of medication supports a potential for cost savings related to, improvement in medication management, changes in prescribing practice, decreased medication redundancy, and the use of medications that may not have a desired therapeutic effect. Medication reviews are a method of monitoring polypharmacy in the aging adult population and those noted with four or more diagnoses, five or more medications, multiple prescribers, multiple pharmacies, and the use of over-the-counter medications, herbs, or nutritional supplements puts them at greater risk (Anguita, 2011). All are identifiable in some correctional

settings. However, herbal preparations and nutritional supplements were generally not available in this project setting. This project supports the use of an IPT approach to medication reviews and the implementation of an organizational policy to ensure routine medication profile monitoring is completed.

Limitations

This project had certain limitations. First, the project was limited to one correctional facility within the north eastern United States. All medication profiles were redacted, thereby making any review of the patient's medical history impossible. Additionally, any discussion with prescribing providers regarding recommendations to their prescribing practices was irrelevant as a result of this project being blinded. However, some of the potentially problematic polypharmacy issues did not require provider input to be determined as a potential problem and were identified by the supervising pharmacist. Lastly, without knowing the identity of which inmate was being discussed, it was impossible to ascertain any background information related to the inmate's medical or mental health diagnosis, or if the medications prescribed were self-administered or taken by the inmate when provided as a nurse administered medication. Without the inmate patient's medical history or medication compliance

The results of this project reinforced a need for a mechanism to monitor and assist in the prevention of potential problematic polypharmacy among the aging inmate population. The two primary areas of potentially problematic polypharmacy discovered in the teams' review that would warrant further intervention and subsequent follow up were medication redundancy and extended or long term use of NSAIDs with PPIs, Medication redundancy was noted in 30% (n = 44) of the profiles reviewed. Further discussion with the prescribing providers regarding this discovery may be beneficial to the patient and organization. The apparent extended or long term prescribing of NSAIDs with PPIs in 55% (n = 47) of the total cases examined also generated

concern among members of the team related to the potential effects of long term use of both categories of medications. The supervising pharmacist and facility health services director agreed that the duration of each prescription should be evaluated and medical need determined as each inmate patient visit with his or her primary care provider. As a result of this project it would be beneficial to examine the software capabilities of CIPS-9, to ensure that data is accurately transferred from the former system into CIPS-9, as evidenced by inmates identified allergies not migrating from one system to another. A quality control mechanism should be established.

Potential problematic polypharmacy is a concern in the correctional health care setting, as evidenced by the data collected in this project. The implementation of an IT to examine medication profiles and ensure periodic medication reconciliation was beneficial to the patient and the organization. Improvement in medication management would be established using this approach to medication profile review, and provide an avenue for quality of care improvements related to the use of medications within the correctional setting. Polypharmacy is a growing and nationally recognized problem that has also been identified and impacted the correctional health care setting. The use of an IPT approach to review medication profiles is a positive step forward in the improvement of medication management within the correctional healthcare setting.

Conclusion

Polypharmacy is having a major impact on the delivery of healthcare in the community, and has been identified as impacting the aging population in the greatest proportions. As individuals age and develop increasing numbers of co-morbidities the potential for problematic polypharmacy also increases. In the correctional healthcare setting individuals many times arrive with several co-morbidities that were not being treated in the community or polypharmacy that has been established in the community healthcare setting. Polypharmacy can be evident in

the inmate patient of any age and was evident in equal proportions in the correctional setting as evidenced by the results of this project.

This project identified a need for the implementation of a routine medication review process within the correctional healthcare setting. The process focuses on the identification of potentially problematic polypharmacy and the provision of recommendations to prescribing providers for improvements in the inmate's medication management. The process for medication profile review was established using an IPT and development of a policy based on the process used in this project. It was the consensus of the team that a team approach was beneficial and provided opportunity for clinical input from pharmacy and nursing staff that assisted in the identification of potentially problematic polypharmacy. However, the process needed revision to eliminate meetings, but continue a team integration review process. An appropriate policy was developed and presented to the chief medical officer for division review.

Polypharmacy is not unique to the community healthcare setting as evidenced by the results of this project. Through the use of an IPT approach and regular medication profile reviews this healthcare issue can be addressed within the correctional healthcare setting. Regular monitoring and collaboration between health care professionals has been identified as having a positive impact on medication management and the control of polypharmacy within the correctional healthcare setting.

References

- Anguita, M. (2011). Polypharmacy: Is it a risk that will cost dearly? *Nurse Prescribing*, 9(12), 578-580. doi:10.12968/npre.2011.9.12.578
- Butts, J., & Rich, K. (2013). *Philosophies and theories for advanced nursing practice* (2nd ed.). Sudbury, MA: Jones and Bartlett.
- Duerden, M., Avery, T., & Payne, R. (2013). Polypharmacy and medicines optimization.

 Retrieved from

 http://www.kingsfund.org.us/sites/files/kf/field/field_publication_file/polypharmacy-and-medicines-optimization-kingsfund-nov13.pdf
- Elliott, R., & Stehilk, P. (2013). Identifying inappropriate prescribing for older people. *Journal of Pharmacy Practice and Research*, 43(4), 312-319. Retrieved from http://jppr.shpa.org.au/lib/pdf/2013-12/RElliott_GT.pdf
- George, C., & Jacobs, L. (2010). Geriatrics medication management rounds: A novel approach to teaching rational prescribing with the use of the medication screening questionnaire. *Journal of the American Geriatrics Society*, 59, 138-142. doi:10.1111/j.1532-5415.2010.03231.x
- Hayes, C. (2012). What is polypharmacy? An overview for HCAs. *British Journal of Healthcare Assistants*, 6(12), 589-592.
- Holly, C. (2014). Scholarly inquiry and the DNP capstone. New York, NY: Springer.
- Jesson, B. (2011). Minimizing the risks of polypharmacy. *Nursing Older People*, 23(4), 14-20. doi: 10.7748/nop2011.05.23.4.14.c8478
- John, L., Myalil, J., Sreedharan, J., Arifulla, M., & Shriwakar, A. (2012). Reducing the burden of multiple medications: nurse's views on strategies to prevent polypharmacy in Ajman

- UAE. *International Journal of Nursing Education, 4*(2), 225-229. Retrieved from: http://www.web.a.ebscohost.com.library.capella.edu
- Kaufman, G. (2014). Polypharmacy medicines optimization and concordance. *Nurse Prescribing*, 12(4), 197-201. doi: http://dx.doi.org/10.12968/npre.2014.12.4.197
- Rollason, V., & Vogt, N. (2003). Reduction of polypharmacy in the elderly a systematic review of the role of the pharmacist. *Drugs Aging 2003*, 20(11), 817-832.
- Viktil, K., Blix, H., Moger, T., & Reikvam, A. (2006). Polypharmacy as commonly defined is an indicator of limited value in the assessment of drug-related problems. *British Journal of Clinical Pharmacology*, 63(2), 187-195. doi:10.11/j.1365-2125.2006.02744x
- Williams, B., & Abraldes, R. (2007). Growing older: challenges of prison and reentry for the aging population. In R. Greifinger, *Public health behind bars from prisons to communities* (pp. 56-72). New York, NY: Springer.

Table 1.
Sample Characteristics

	Number (%) of Sample	
Gender		
Male	86 (100%)	
Female	0%	
Age group		
16-49	42 (49%)	
50- older	44 (51%)	
Maximum facility population	1600 (100%)	
Population when samples were collected	1487 (92%)	

Figure 1. Sample Characteristics

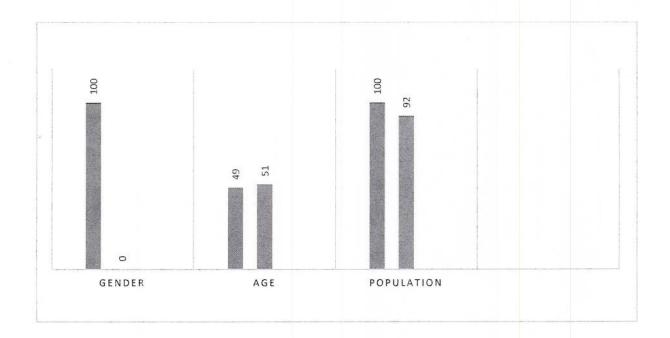
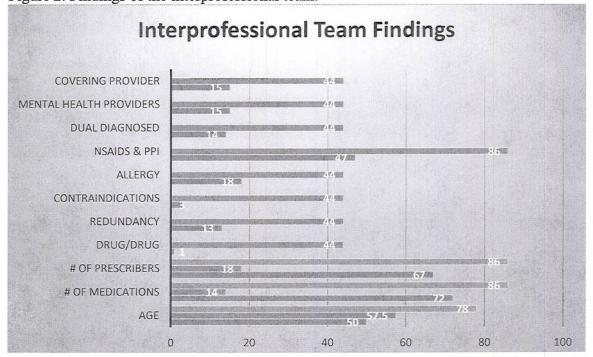


Table 2. Findings of Interprofessional Team

	Number (%) of group	Total Profiles Reviewed
Median age of inmate patient	57.5 years	
Number of medications prescribed 5-10 11-18	72 (84%) 14 (16%)	86 86
Number of prescribers 1-3 4-6	67 (78%) 18 (21%)	86 86
(Age 50 & >)		
Potential for drug/drug Interaction Medication redundancy Clinical contraindications Allergies NSAID & PPI use Dual diagnosed (medical/mental health) Mental Health Providers Covering Provider	1 (.02%) 13 (30%) 3 (.06%) 18 (41%) 47 (55%) 14 (32%) 15 (34%) 15 (34%)	44 44 44 44 86 44 44

Figure 2. Findings of the interprofessional team.



APPENDIX A. STATEMENT OF ORIGINAL WORK

Academic Honesty Policy

Capella University's Academic Honesty Policy (3.01.01) holds learners accountable for the integrity of work they submit, which includes but is not limited to discussion postings, assignments, comprehensive exams, and the dissertation or capstone project.

Established in the Policy are the expectations for original work, rationale for the policy, definition of terms that pertain to academic honesty and original work, and disciplinary consequences of academic dishonesty. Also stated in the Policy is the expectation that learners will follow APA rules for citing another person's ideas or works.

The following standards for original work and definition of *plagiarism* are discussed in the Policy:

Learners are expected to be the sole authors of their work and to acknowledge the authorship of others' work through proper citation and reference. Use of another person's ideas, including another learner's, without proper reference or citation constitutes plagiarism and academic dishonesty and is prohibited conduct. (p. 1)

Plagiarism is one example of academic dishonesty. Plagiarism is presenting someone else's ideas or work as your own. Plagiarism also includes copying verbatim or rephrasing ideas without properly acknowledging the source by author, date, and publication medium. (p. 2)

Capella University's Research Misconduct Policy (3.03.06) holds learners accountable for research integrity. What constitutes research misconduct is discussed in the Policy:

Research misconduct includes but is not limited to falsification, fabrication, plagiarism, misappropriation, or other practices that seriously deviate from those that are commonly accepted within the academic community for proposing, conducting, or reviewing research, or in reporting research results. (p. 1)

Learners failing to abide by these policies are subject to consequences, including but not limited to dismissal or revocation of the degree.

APPENDIX A. STATEMENT OF ORIGINAL WORK

Statement of Original Work and Signature

I have read, understood, and abided by Capella University's Academic Honesty Policy (3.01.01) and Research Misconduct Policy (3.03.06), including the Policy Statements, Rationale, and Definitions.

I attest that this dissertation or capstone project is my own work. Where I have used the ideas or words of others, I have paraphrased, summarized, or used direct quotes following the guidelines set forth in the APA *Publication Manual*.

Learner name and date	Russell R. Blair 11/22/15	
Mentor name and school	Debbie Nogueras School of Nursing and Health Sciences	