



# Teaming: A Case of Improved Patient Outcomes as a Result of Multi-Disciplinary Care

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## INTRODUCTION

Respiratory diseases pose significant challenges to healthcare providers due to their complex nature and potential for rapid deterioration. Effective management often requires a multidisciplinary approach, emphasizing collaboration among healthcare professionals. This poster presents a case study highlighting the transformative impact of interprofessional teaming and decentralized pharmacist involvement on improving the respiratory status of a patient.

The purpose of this study was to evaluate the effectiveness of an interdisciplinary team model of care in assisting patients to achieve improved outcomes of chronic conditions in a primary care rural setting.

## TREATMENTS/INTERVENTIONS

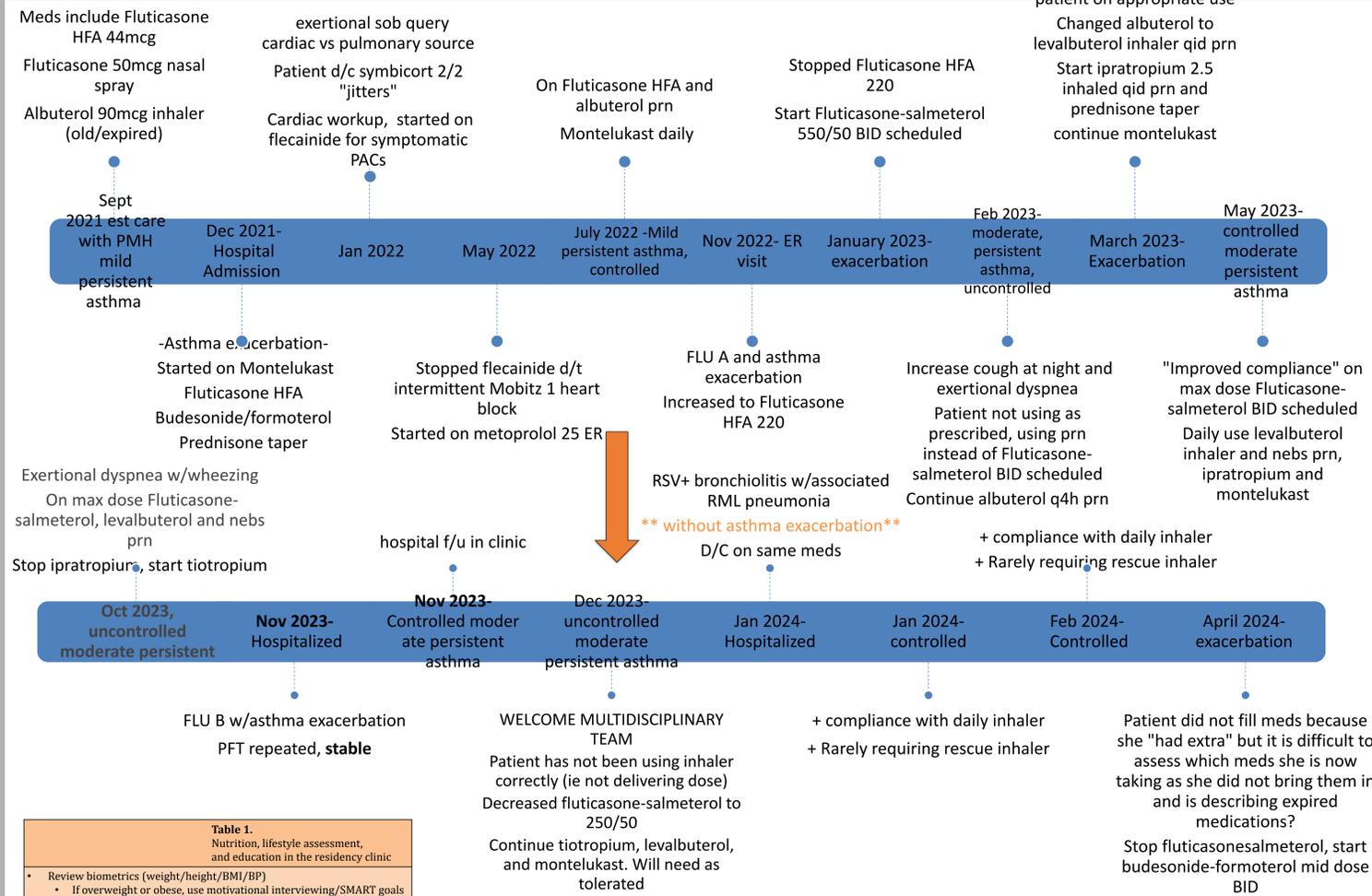
A family medicine clinic at a rural medical center developed an interdisciplinary team clinic composed of case managers, a decentralized pharmacist, nursing staff, a family medicine resident, and a board-certified family medicine attending physician. Patients are seen by our decentralized pharmacist to optimize outcomes in chronic, complicated patients. They are seen for an initial consultation and for additional visits as needed.

To evaluate the impact of the decentralized pharmacist, we recorded the following measures for each patient at the time of initial visit with pharmacist, at follow up visits within 1 and 2 month, and at the most recent clinic visit: compliance with daily inhaler, use of rescue inhaler, hospitalizations or ER visits secondary to asthma exacerbation.

This case study was followed from Sept 2021 to current in the outpatient residency clinic of the Choctaw Nation Health Care Facility in Talihina, a town of approximately 1000 residents located in rural SE Oklahoma within the Choctaw Nation. The department is patient-centered and is staffed by 7 physicians, 12 residents, 4 nurses, 1 decentralized pharmacist and 3 case managers.

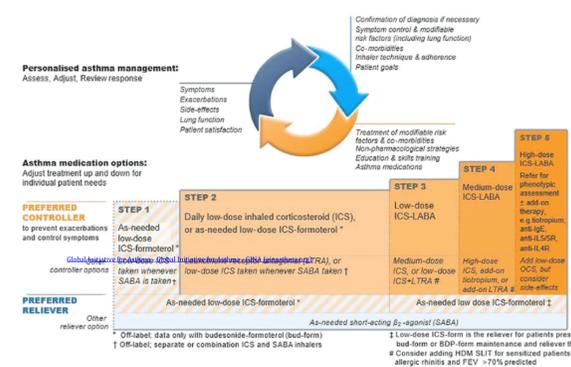
## CASE REPORT INFORMATION

A 77-year-old female with past medical history of hypertension, hyperlipidemia, gastroesophageal reflux, osteoarthritis, and asthma was established with our clinic in September 2021. Prior to and since establishing, patient was noted to have multiple ER visits, hospitalizations, and decreased quality of life secondary to asthma exacerbations. Her therapy was escalated to appropriate medical management by GINA criteria without consistent control. On incorporation of multidisciplinary care including a decentralized pharmacist, it was recognized that the patient was not using her medications appropriately. On our timeline, you can see an improvement in control after integrating the component of pharmacy assessment and education noted in Table 2.



**Table 1.** Nutrition, lifestyle assessment, and education in the residency clinic

- Review biometrics (weight/height/BMI/BP)
  - If overweight or obese, use motivational interviewing/SMART goals to help patient finds ways to achieve 5%-10% weight loss over next 3 months as a goal.
  - Reduce sodium and increase potassium to help lower BP.
- Review pertinent laboratory values (eg, CBC, CMP, cholesterol panel, TSH)
  - Establish short- and long-term goals based on the patient's age and condition.
  - Establish goals for lipids and dietary/lifestyle patterns to help improve the numbers.
  - If chronic kidney disease is present, adjust diet according to current recommendations.
- Review of tobacco status
  - Counsel patient on the importance of quitting and provide support via the quit line, classes, and nicotine replacement therapy.
- Review of the inhaler use
  - Identify patterns and ways to improve compliance and understanding of controller vs prn medications.
  - If the patient is noncompliant, use motivational interviewing to help patient recognize that it is an important tool in managing asthma.
  - Set goals for "at rest" and exertional functionality.
  - If patient does not have an exacerbation protocol, then provide one and instruct on the use of it.
- Review patient's medical records and interview the patient to see whether PPT and respiratory therapy was conducted within the past year.
  - Assess patient physical activity level
    - Develop a plan to help increase activity per tolerance up to 30 min/d.
    - Set goals for activity.



**Table 2.** Pharmacy Assessment and Education

- Review patient's electronic medical record for medication history and laboratory findings.
- Provide medication reconciliation at time of appointment, including prescribed and over-the-counter therapies and herbal supplements.
- Review cost-effectiveness of therapies and make recommendations based on insurance coverage and the Choctaw Nation medication formulary.
- Counsel patients on new medications including indication, dosing, adverse effects, and monitoring.
- Assess for control of asthma related signs and symptoms and make recommendations for therapy adjustments.
- Use the teach-back method for evaluating current medication administration techniques.
- Educate on correct device administration techniques and appropriate use of all medications.
- Review presentation of asthma related signs and symptoms, exacerbations, and steps for management.
- Assess medication adherence and identify barriers for taking medicines/therapies as prescribed.
- Offer telephone follow-up for further therapy monitoring (eg, improved asthma control, medication tolerability, decreased SABA use, etc.)

## RESULTS

Over the course of four months after initiation of multidisciplinary care incorporating a decentralized pharmacist, the patient's respiratory status showed significant improvement. The frequency and severity of exacerbations decreased, resulting in fewer asthma-related hospital admissions and improved quality of life. The collaborative efforts of the interprofessional team led to better symptom control, enhanced patient understanding of their condition, and improved adherence to therapeutic interventions.

## DISCUSSION

Asthma is a chronic respiratory condition characterized by airway inflammation and hyperresponsiveness, often necessitating a multifaceted approach to management. Interprofessional collaboration among healthcare providers is crucial for optimizing treatment outcomes and improving patient quality of life. This poster presents a case study highlighting the transformative impact of interprofessional teaming and decentralized pharmacist involvement in managing moderate persistent asthma. The inclusion of a decentralized pharmacist proved instrumental in optimizing medication therapy. Through medication reconciliation and comprehensive medication reviews, the pharmacist identified potential adherence issues, medication gaps, and opportunities for therapy optimization. Patient education on proper inhaler technique and medication adherence further improved treatment outcomes.

Over a six-month period, the patient's asthma control significantly improved. The frequency and severity of exacerbations decreased, allowing the patient to experience fewer symptoms and resume normal activities. The collaborative efforts of the interprofessional team led to better medication adherence, improved self-management skills, and enhanced patient satisfaction with asthma care.

## CONCLUSION

This case underscores the importance of interprofessional collaboration in managing complex respiratory conditions. By leveraging the expertise of primary care physicians, respiratory therapists, nurses, and pharmacists, healthcare teams can achieve better outcomes for patients with respiratory diseases. Future initiatives should prioritize interdisciplinary communication and teamwork to optimize patient care and enhance clinical outcomes.

## REFERENCES

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