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2020

## **Multidisciplinary Concussion Rehabilitation Team Referral Demographics, Assessments and Intervention focus: A Retrospective Analysis**

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### **Recommended Citation**

Tauer, Angela A., "Multidisciplinary Concussion Rehabilitation Team Referral Demographics, Assessments and Intervention focus: A Retrospective Analysis" (2020). *OT Student Capstones*. 35.  
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## Introduction

- 5.3 million Americans are currently living with a concussion-related disability and facing challenges to return to a full and productive life.
- Post-concussion process: Patients may go to hospital emergency rooms, are evaluated, and discharged if injuries are non-life threatening.
- Recommended complete rest exceeding 3 days is not beneficial, and that a gradual resumption of prior level activities should resume as soon as tolerated (24-48 hours after injury) as well as supervised exercise.
- Adults generally recover rapidly within 10-14 days on their own with gradual return to everyday activities; however approximately 20% will experience persistent concussion symptoms and need specialized care.
- Multidisciplinary concussion teams are unique to each facility as there are no protocol or procedures for best management of this injury.
- Typically, individuals who can be found on a concussion team include physicians, occupational therapists, physical therapists, speech-language pathologists, psychologists, neuropsychologists, and a social worker

## Purpose

The purpose of this study is to identify demographic factors, mechanism of injury, assessments, and treatment by healthcare professionals on a multidisciplinary concussion rehabilitation team in an outpatient clinic for ongoing management of individuals across the lifespan.

## Methods

**Design:** Retrospective chart review

- Data collected and analyzed on an electronic database by a single reviewer
- Study was completed over a 15-month time period: Jan 2019-Mar 2020
- Records of 360 patients were yielded of which 139 were selected

**Inclusion Criteria:**

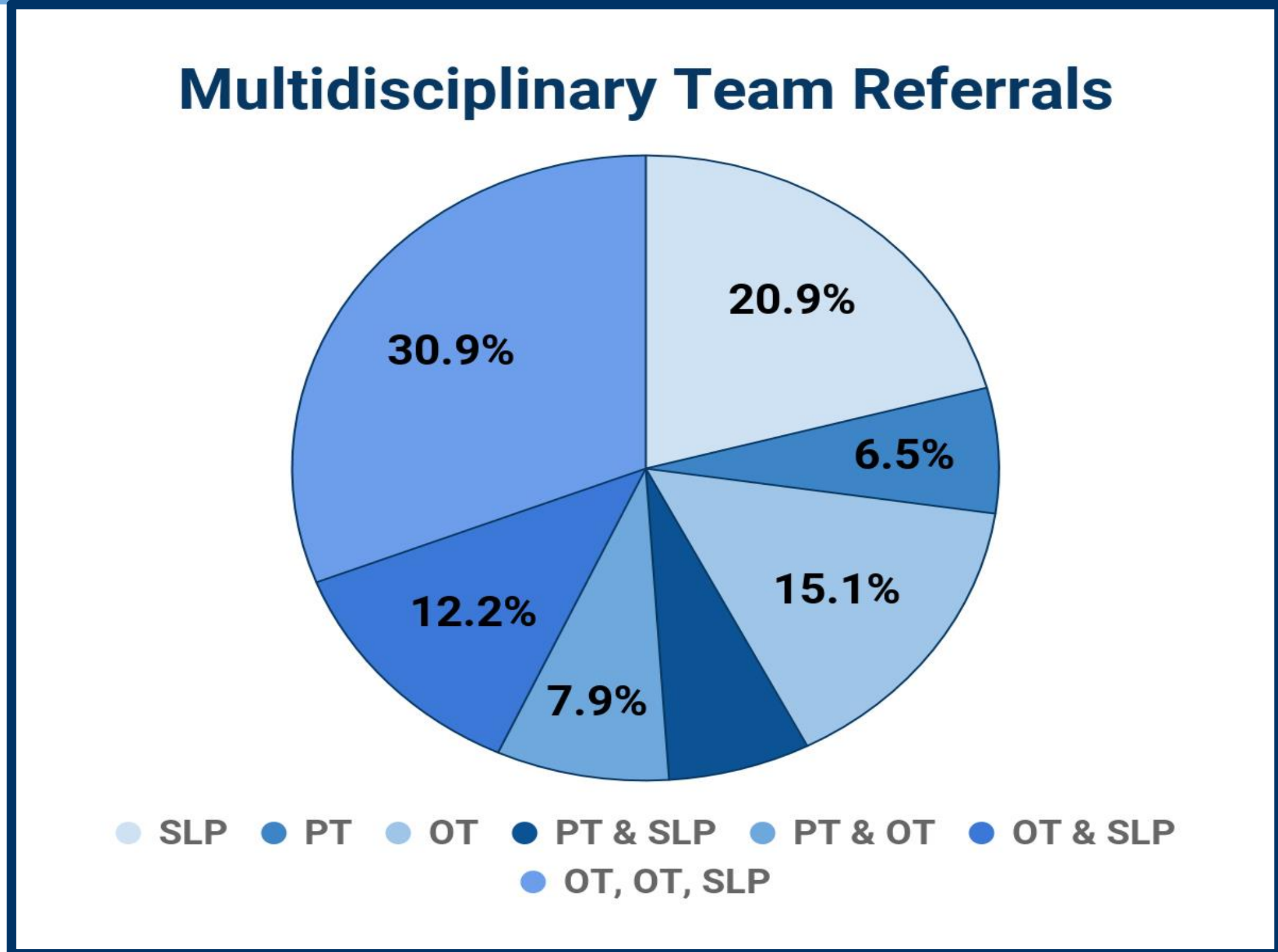
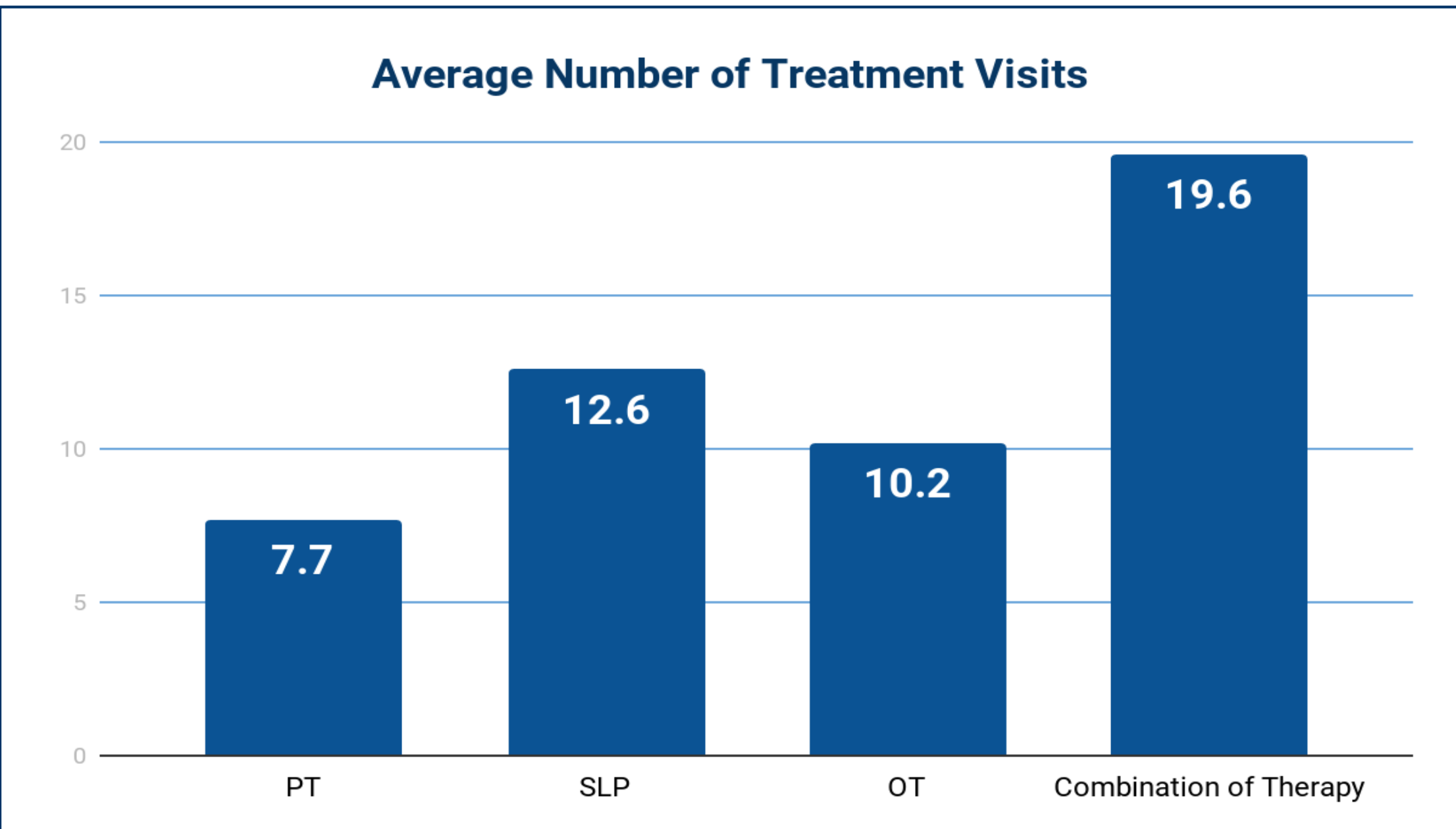
- Patients who sustained a concussion or mild traumatic brain injury
- MOI: Motor Vehicle Accident, Fall, or Sport Related Concussion
- Completed an evaluation and discharge assessment

Study approved by the A.T. Still University Institutional Review Board

## Results

Occupational Therapy	Speech Therapy	Physical Therapy
<b>ICD-10 Codes by Discipline</b>		
<ul style="list-style-type: none"> <li>-Monocular esotropia, right eye</li> <li>-Monocular esotropia, left eye</li> <li>-Saccadic eye movements</li> <li>-Convergence insufficiency</li> <li>-Unspecified disorder of binocular movement</li> <li>-Attention and concentration deficit</li> <li>-Diplopia</li> </ul>	<ul style="list-style-type: none"> <li>-Cognitive communication deficit</li> <li>-Adult onset fluency disorder</li> <li>-Attention and concentration deficit</li> <li>-Expressive language disorder</li> <li>-Other symptoms and signs involving cognitive functions and awareness</li> <li>-Other amnesia</li> <li>-Mixed receptive-expressive language disorder</li> </ul>	<ul style="list-style-type: none"> <li>-Acute pain due to trauma</li> <li>-Headache</li> <li>-Weakness</li> <li>-Unsteadiness on feet</li> <li>-Other abnormalities of gait and mobility</li> <li>-Dizziness and giddiness</li> </ul>
<b>Assessment Areas by Discipline</b>		
<ul style="list-style-type: none"> <li>-Surveys</li> <li>-Pupillary Response</li> <li>-Visual Acuity</li> <li>-Saccade and Pursuit</li> <li>-Ocular Alignment</li> <li>-Convergence/Accommodation</li> <li>-Other Visual Assessments</li> <li>-Cognitive Assessments</li> <li>-Functional Assessments</li> <li>-Bioness Integrated Therapy System</li> </ul>	<ul style="list-style-type: none"> <li>-Woodcock Johnson IV Test of Cognitive Abilities</li> <li>-The Behavioral Assessment of Dysexecutive Syndrome</li> <li>-Attention Process Training Test</li> <li>-Oral Vocabulary Test</li> <li>-Other Cognitive Assessments</li> </ul>	<ul style="list-style-type: none"> <li>-Surveys</li> <li>-Balance Assessments</li> <li>-Vestibular/Balance Assessments</li> <li>-Functional Assessments</li> </ul>

Demographics (n)		
Mean Age	139	42 yrs
Age Range	139	16-82 yrs
Female	91	65.0%
<b>MOI</b>		
MVA	80	57.6%
Fall	43	30.9%
Sport	16	11.5%
<b>Time Since Injury</b>		
Mean weeks	139	48 wks
Range	139	1-1,385 wks



## Conclusion

In relation to the high number of concussions or mild TBI's that occur every year, only a very small percentage are seen in an outpatient clinic for rehabilitation. Each healthcare individual on the multidisciplinary concussion team is specialized to administer and interpret different assessments and tools based on their scope of practice and training to provide the best outcomes for concussion patients. This article provides patients and healthcare providers a general overview of one concussion team model that was successful in returning patients to prior level of function in limited visits regardless of how long ago their injury occurred.

## Implications

- Occupational therapists are uniquely qualified to assess and help individuals return to activities of daily living, work, learn, and play because of the extensive knowledge and skills they have in client-centered assessments, environmental modifications, activity analysis, and activity grading to maximize individuals participation.

## References Available Upon Request