

## Changes in Orthopedic Surgery at the Community Level

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### Introduction

In the United States, the delivery of health care is changing at the community level. The media has focused attention on health care in relation to the Corona virus, but not all of the recent changes are related to the epidemic.

Historically, the delivery of health care has evolved over time. This has been especially true with respect to the delivery of care. Health care providers have been conservative professionals. They have altered their practice patterns slowly.

A recent example of changes in healthcare practice at the community level is movement of surgical procedures from inpatient to outpatient settings. Minor surgical procedures have been carried out in ambulatory settings for decades, but recently there have been some notable recent additions.

One of these developments has been the shift of additional orthopedic surgery procedures, such as joint replacements, from inpatient hospitals to outpatient facilities. This trend has been apparent during the past three years.

This development has been supported by several factors. A number of orthopedic procedures frequently involve healthy patients, who can undergo orthopedic surgery without the need for inpatient hospital admission. Health care payers such as Medicare have agreed to reimburse these procedures on an outpatient basis.

### Method

This analysis reviewed the movement of certain orthopedic surgery patients from inpatient to outpatient settings. The procedures included hip and knee joint replacements, as well as a wider range of orthopedic surgery.

The analysis involved these procedures in the hospitals of Syracuse, New York. These Providers include Crouse Hospital (17,204 inpatient discharges excluding well newborns – 2020), St. Joseph's Hospital Health Center (21,328 inpatient discharge- 2020), and Upstate University Hospital (30,988 inpatient discharges – 2020).

Historically, these hospitals have provided a full range acute care to an immediate service area with a population of approximately 600,000. They have also

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Table 1. Inpatient Hospital Discharges: Hip & Knee Joint Replacement and Total Orthopedics Surgery by Severity of Illness Syracuse Hospitals July - January 2018 - 2021

	Severity of Illness				
	Minor	Moderate	Major	Extreme	Total
APR DRG 301 - Hip Joint Replacement					
2018 - 2019	526	575	53	19	1,173
2019 - 2020	477	588	52	25	1,142
2020 - 2021	312	417	55	20	804
Difference 2018 - 2020	-214	-158	2	1	-369
APR DRG 302 - Knee Joint Replacement					
2018 - 2019	595	522	31	7	1,155
2019 - 2020	565	394	31	4	994
2020 - 2021	235	219	33	7	494
Difference 2018 - 2020	-360	-303	2	0	-661
APR DRGs 301 - 322 - Orthopedic Surgery					
2018 - 2019	1,956	2,191	495	100	4,742
2019 - 2020	1,887	2,050	497	130	4,564
2020 - 2021	1,226	1,636	495	127	3,484
Difference 2018 - 2020	-730	-555	0	27	-1,258

Data include patients aged 18 years and over.  
Source: Hospital Executive Council.

provided specialty services to the eleven county Central New York health service area with a population of approximately 1,400,000.

The analysis focused on comparison of inpatient orthopedic discharges for hip replacements, knee replacements, and other orthopedic surgery by severity of illness during a three year period. The comparisons involved patients discharged in July 2018 – January 2019, July 2019 – January 2020, and July 2020 – January 2021 to avoid the impact of the Corona virus epidemic in the first half of 2020.

The results of this analysis are summarized in this table 1. This information included combined orthopedic surgery utilization for the Syracuse hospitals

during the three seven month periods.

The data demonstrated that, from July 2018 – January 2019 to July 2020 – January 2021, numbers of inpatient discharges for hip joint replacement declined by 31.5 percent, from 1,173 – 804; discharges for total knee replacement declined by 57.2 percent, from 1,155 to 494; and other orthopedic surgery declined by 26.5 percent, from 4,742 to 3,484 in the Syracuse hospitals.

The data also indicated that almost all of the reductions in inpatient discharges involved relatively healthy patients, those at Minor or Moderate severity of illness. These patients accounted for 372 hip replacements, 663 knee replacements and 1,285 for those with other orthopedic surgery.

The largest declines also involved patients at Minor severity of illness. They included 40.7 percent of hip replacements, 60.5 percent of knee replacements, and 37.3 percent of other orthopedic surgery.

These data provide an example of changes in health care utilization that develop over time. They suggest the need for careful planning by providers and payers in order to monitor and address these developments.