Declines in Lower Extremity Amputation in the U.S. Medicare Population, 2000-2010

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We have no relevant disclosures.

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Diabetes & amputation

- The incidence of diabetes has skyrocketed in recent years...

... but the **rate of amputation** has gone down significantly.

Possible explanations

1. Better preventative care
2. Improved vascular care
3. Improved orthopaedic care for DFU?
   - Total contact casting: protects & promotes healing
   - Tendon release procedures: relieve pressure spots created by stiff diabetic tendons

Both approaches saw significant increases in support in the literature over the past decade.¹⁻⁴

Objectives

1. To determine in detail trends in the level of LEA
2. To establish whether improvements in the orthopaedic approach to DFU could be responsible for some of the recent decline in LEA.

Methods

• We sought to achieve these goals through a comprehensive analysis of claims data from the entire U.S. Medicare population over the period 2000-2010, using information made freely available to the public by the Centers for Medicaid and Medicare Services (CMS).
Overall, utilization rate fell from 282.5 to 201.0 (-28.8%) per 100,000.

GREEN = “Major” (>ankle)
144.4 to 77.1 per 105
-46.6%

BLUE = “Minor” (≤ankle)
138.1 to 123.9 per 105
-10.3%
% change in utilization rate, 2000-2010

- Hip: -38.4%
- Femur: -50.5%
- Knee: -46.7%
- Lower Leg: -42.4%
- Ankle: -48.8%
- Midfoot: -35.5%
- Metatarsal: -1.8%
- Toe: 23.9%
- Partial Toe: -10.3%
Orthopaedic Treatments for DFU

![Graph showing trends in orthopaedic treatments for DFU from 2000 to 2010. The graph includes lines for Achilles tendon release, Gastrocnemius recession, Tenotomy, other tendons, and Total contact casting. The trend lines show an increase over time, with Total contact casting line showing a more significant increase compared to the others.]
Discussion

• Our data clearly demonstrate that LEAs have become less frequent since the turn of the century.
• This has occurred despite continued high prevalence of comorbidities in the population.
• Over the same period, utilization of orthopaedic treatments for DFU increased sharply.
Discussion

• Furthermore, LEAs are today more likely to occur at more distal, limb-conserving locations.
  • More distal level : better outcomes
  • There is some concern about the higher rate of revision observed for more distal amputations.
  • Our data seems to indicate, however, that revision is not required for a large percentage of minor amputees, as evidenced by the inverse growth relationship between major and minor amputations.