logical advancements; possible dominance of an unknown factor, for instance, the discount rate), these limitations are not sufficient to preclude future CEA/CBA studies related to the medical technology of orthopedic joint implants.

It has been pointed out that the costs of orthopedic joint implants can be more easily measured than the benefits. As a result, it is easy to overemphasize the costs associated with such procedures. Furthermore, there is a danger of underestimating benefits by inadvertently discounting the value of relieving pain and restoring functional ability to a predominantly nonworking population. Therefore, it might be suggested that studies of othopedic joint implant technology should focus on the efficiency and cost effectiveness of alternative investments related to orthopedic joint implants.

A CEA study of the artificial hip would be a particularly worthwhile future research endeavor. Since the necessary data are available, it would be possible to complete the study relatively quickly, easily, and inexpensively. Because arthritis affects so many persons and in most cases eventually affects the hip joint, a CEA study of the artificial hip to answer questions such as those listed below would be of widespread interest.

- What are the costs of artificial hip implants?
- For which population cohorts is it most cost effective to adopt this technology?
- How do cost-effectiveness ratios computed for investments in orthopedic joint implants compare with similar ratios computed for investments in regional arthritis and rheumatism nonsurgical rehabilitation centers?
- What are the necessary data that must be collected in order to conduct similar studies for other orthopedic joints?
- What are meaningful criteria to adopt in order to screen new and other existing orthopedic joint implant technologies?

In conclusion, the value of undertaking a future CEA/CBA of artificial hip implants is that the application of such analysis would force one to be explicit about a technology that potentially may affect many people. Also, it would furnish a tested framework for evaluation of other more controversial medical technologies (e. g., other prostheses and devices used to restore function to malfunctioning organs and other parts of the body). Finally, the application of CEA/CBA to the technology of hip implants would illustrate a methodology realistically adapted to available data. Such information would be greatly useful to Federal policy makers and to consumers. It would also be useful to health systems agency boards, to health maintenance organization administrators, and to other health planning agencies with the responsibility for allocating resources for research and capital expenditures. The information might also be valuable to industrial concerns that must estimate the orthopedic equipment market and to educational institutions that must know where training emphasis should be placed.

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