

step of development/dissemination processes), *transparency* (assumptions/inputs are disclosed in an understandable, timely way), *inclusiveness* (perspectives drawn from broad range of stakeholders), *diversity* (differences in subpopulations, trajectory of disease, and stage of a life should be accounted for), *outcomes* (includes those that patients have identified as important), and *data* (variety of credible data sources are used allowing for timely incorporation of new information and account for the diversity of patient populations and patient-centered outcomes). The Rubric describes each domain and includes illustrative examples of how patient engagement/centeredness can be operationalized through direct and indirect pathways.

### CONCLUSIONS:

The NHC Rubric is a first step toward creating patient-centered value assessments that patients and their families can rely on. It is intended to assist all stakeholders, especially the patient community, in assessing the level of patient centeredness and engagement in a given framework or model. It can be a guide to support developers in conceptualizing plans for meaningfully engaging patients.

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## OP40 First Case Of Disinvestment Using Real-World Evidence In Brazil

### AUTHORS:

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### INTRODUCTION:

Beta-interferons are used as first-line therapy for relapsing-remitting multiple sclerosis in Brazil. In order to evaluate the possible inferiority of one of the beta-interferons available and support a guideline

update, we conducted an eleven-year (January 2000 to December 2010) nationwide real-world performance assessment using the Unified Health System (SUS) databases.

### METHODS:

We assessed whether patients using subcutaneous beta-interferon switched treatment, relapsed or died (composite event) earlier than patients using intramuscular beta-interferons. Patients without a dispensing registry longer than three months were censored. We used the Kaplan-Meier method to estimate the cumulative probability of persistence on initial treatment, and compared groups with the Log-rank test. The influence of the drug on the occurrence of event was assessed with Cox proportional hazards analysis.

### RESULTS:

The number of patients included was 12,154, and the majority started treatment with subcutaneous beta-interferon-1a (45.7 percent), followed by subcutaneous beta-interferon-1b (27.7 percent) and by intramuscular beta-interferon (26.6 percent). Women represented 73.1 percent and the mean age was  $38.93 \pm 11.34$  years old. The group of patients who used intramuscular beta-interferon switched treatment, relapsed or died earlier (median 47 months; 95 percent Confidence Interval, CI 44–52) than patients using the subcutaneous beta-interferons, (69 months (95 percent CI 64–76) for beta-interferon 1a and 73 (95 percent CI 66–84) months for beta-interferon 1b) ( $p < .0001$  for both comparisons). Accordingly, the use of intramuscular beta-interferon was associated with a higher probability of event (Hazard ratio, HR 1.38; 95 percent CI 1.29-1.48), while the use of the other beta-interferons had a protective effect (1a: HR .86; 95 percent CI .81-.92; 1b: HR .89; 95 percent CI .83-.95).

### CONCLUSIONS:

The inferiority of intramuscular beta-interferon found in the real-world corroborates findings from head-to-head studies and systematic reviews conducted by Cochrane and the National Commission for Technology Incorporation in SUS (CONITEC/Brazil). This result led to

disinvestment in intramuscular beta-interferon and was the first case of clinical guideline update using real-world evidence in Brazil.

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## OP42 Cost-Benefit Of Computed Tomography In Secondary Hospitals In China

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### INTRODUCTION:

With the promotion of a tiered medical service system, secondary hospitals will play a more important role in the future. This study aims to explore the cost-benefit of computed tomography (CT) in secondary hospitals in China, with a view to providing information for overall economic management in hospitals as well as for regional planning of medical equipment in different areas.

### METHODS:

Fifty-eight secondary hospitals from six provinces located in the eastern, central, and western regions of China were selected as the study sample. Questionnaires were used to collect information on the cost structure, efficiency, and benefits of CT in the secondary hospitals in the past 5 years. Cost analysis was conducted from the perspective of the hospitals, which mainly referred to direct fixed costs and variable costs. We analyzed the investment recovery years<sup>a</sup>, cost recovery rate<sup>b</sup>, and benefit-cost ratio to evaluate the economic benefits of CT. We also analyzed the technological benefits of CT based on its effective utilization rate<sup>c</sup> and positive detection rate.

a: Investment recovery years = total original investment / (annual net income + annual depreciation expense)

b: Cost recovery rate = average income per check / average cost per check

c: Effective utilization rate = single equipment utilization rate \* positive detection rate  
(Single equipment utilization rate = actual working time / rated working time)

### RESULTS:

Depreciation costs (36.3 percent) were the largest proportion of all costs over the 5-year period, followed by material costs (22.2 percent), maintenance costs (18.2 percent), labor costs (17.1 percent), and electricity consumption (1.2 percent). The investment recovery periods of CT in the eastern, central, and western regions were 2.5, 2.8, and 3.1 years, respectively; the cost recovery rates were 186.5 percent, 172.0 percent, and 174.1 percent, respectively; the benefit-cost ratios were 1.9, 1.7, and 1.7, respectively; the effective utilization rates were 46.1 percent, 58.3 percent, and 71.2 percent, respectively; and the positive detection rates were 52.3 percent, 60.5 percent, and 73.3 percent, respectively.

### CONCLUSIONS:

The current study indicates that the cost-benefit of CT is good in secondary hospitals, especially in terms of economic benefits. But to achieve greater technological benefits in all three regions, more appropriate utilization of CT is needed.

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## OP43 Unconventional Health Technology Assessment Use: Diagnosis Of Likely Emerging Tropical Diseases

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### INTRODUCTION:

The increase in travelers and refugees combined with global warming may soon lead to the development of tropical diseases such as *Schistosoma* or *Strongyloides* infections in some European countries.

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