

**Data Technical Subcommittee**  
**Draft Report to Negotiated Rulemaking Committee**  
**January 18, 2011**  
**Washington, DC**

**1. Charge to the Subcommittee:**

Consider (1) data sources available on demand/need and supply and (2) possible methods for weighting to get at potential “population to provider” measures – a key element of any health professional shortage or medical underservice designation.

(Potential weighting or criteria or filtering for poor health status or “high need” of an area also to be examined – based on proposal that Congress would accept validity of relationship of shortage/underservice to poor health outcomes)

**2. Issues Discussed by the Subcommittee (conference calls):**

a. Committee members came to the table with a number of issues, ideas, and suggestions for models, including interest in strategies to complement (or possibly provide an alternative approach to) the concept of “barrier free” adjustment to “population-based demand” as provided by Eric Turer to the Rulemaking Committee; subcommittee wanted to consider a potential simpler weighting for age and sex distribution. Issues discussed included:

b. Provider, capacity, “supply” side:

- i. Providers: which should be counted for primary care? Inclusion/exclusion decisions
- ii. Special considerations and issues? (matrix developed) Adjustments related to “availability” to the population of interest; data sources and their limitations

c. Population need or demand measures and possible weights or adjustments:

- i. Literature on appropriate panel size for a provider or group (Phillips),
- ii. “Social deprivation” factor analysis and “predictive” model (Phillips/Petterson),
- iii. Maps requested for health status and SES factors (JSI)
- iv. Potential points or weighting strategies for SES and Health Status factors
- v. Review of components required by statute for MUAs and for HPSAs – commonalities examined, need to address population and provider parts of the equation
- vi. Population: which segments should be counted in assessment of need for primary care? What do alternative weighting approaches cover with respect to the “barriers” thought to impede care for many who have social or economic impediments?

**3. Comments (options, pros and cons, recommendations, and issues still needing further discussion, related to major topics)**

a. Counting and Weighting of Providers – Supply side

Subcommittee members available for this discussion had **substantial agreement on inclusion guidelines** for provider types.

**Issues needing more information and discussion** have to do with

(1) **current and potential data availability** on engagement in **direct patient primary care** service (to facilitate impact testing, “threshold” setting issues, and eventual implementation – so that the burden of surveying/accounting for providers might at least be somewhat relieved by improved starting data) – Noted that the AMA data set and other sources generally overcount for variety of reasons (PC providers in non-PC roles, movement not accounted for, full or partial retirement not documented)

(2) **How to account for the mix of providers** – physicians (with/without practices limited to age or sex groups), and NPs/PAs/CNMs – is there a “sweet spot” or one based on studies of practice models that can relate productivity in terms of panels (patients) or in terms of encounters –e.g. encounters per day that can be seen by each or by a blend?

b. Counting and Weighting of Populations – Need/Demand side

(1) Subcommittee had substantial agreement on inclusion criteria for populations (in matrix) – **agreed** that it would be desirable to continue generally the current criteria – exclude military and federal and state institutional prison populations separately served (permit facility designations), and count (according to length of time in the community) the seasonal populations including migrant workers, seasonal workers, seasonal residents, and tourists (notably where tourism is major component having an impact on the health services of an area).

(2) Regarding possible **adjustments/weighting** related to age, gender, and other characteristics: options are

- i. no adjustment or
- ii. simple age/gender group adjustment based on MEPS norms (using the barrier free population’s experience yields higher adjustments for all or some age/sex groups; the expected visits per person can be applied to the population of each age/sex group in an area to come up with total expected visits, or the ratio (of visits, per MEPS) for each age/sex group to the total and total can be used to obtain a weight to apply to the populations of each age/sex group;<sup>1</sup>

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<sup>1</sup> AJR explanation of age/sex adjustment – standardization approach – for population rather than visits.

- iii. adjustments or standardization for age and gender in conjunction with fair/poor health (the “fair/poor health” measure from BRFSS, taking advantage of the MEPS data on additional visits for populations with fair/poor health, OR using a comparable multiplier derived from the Standardized Mortality Ratio and its known/demonstrated correlation to “fair/poor health” from BRFSS);
- iv. Adjustments using other multipliers -- related to specific health status measures (SMR, IMR, Fair/poor health) to adjust estimated need – this can be proportional to the degree of the health status disparity – can be factored in after the population to provider ratio (need/capacity) ratio is calculated;
- v. Variables (if validity and appropriateness are agreed upon) can be combined with factor analysis or regression – “index” or cluster analysis predictive model to represent expected need of a population (e.g., Social Deprivation Index – presentation and extensive discussion among committee members; County Health Rankings; other options noted).

(Note: health status can be considered as a population characteristic that suggests additional or reduced demand; it can also be considered to be reflecting “outcomes” of sufficient or insufficient availability of or access to care, so it can be taken into account in the step of accounting for the population demand/need. Items iv. and/or v. could be implemented as considerations of potential “high need” – for a MUA designation, for example – if the initial provider to (weighted) population estimate does not indicate “underservice.” One version of the SDI that included population to provider ratio was suggested but not accepted as an alternative approach to designation as a whole.)

The Data/Technical Subcommittee does NOT HAVE CONSENSUS on these options (under b. (2)).

- c. Consider other indicators of high need, other factors affecting ACCESS to or AVAILABILITY of services to the population of an area. JSI has developed an extensive set of map layers that show different dimensions associated with health status and socio-economic indicators.

**Narrative discussion:**

Process to date: Chair Alice Rarig requested the Subcommittee to spend time considering the pros and cons (based on their expertise, experience and available

science) of the “puzzle pieces” – the individual variables available and the “dimensions” of population need that they represent.

Having heard the JSI “barrier free” options presented to the big committee, the Chair acknowledged that alternative approaches had been mentioned, and she invited members to bring options they wished to present to the group. As a result, the Subcommittee heard a presentation by Bob Phillips and alternate Steve Petterson on “Social deprivation index” (or SDI) developed as a proxy for health status where it is not directly measured in international studies. Some members of the subcommittee see the SDI as an available tool to shortcut to designation (as an alternative to “barrier free” or health status adjustment to population need, or even demand and supply functions together – which is how it was presented). However Alice Rarig challenged the face validity, and she does not accept that the selected components of this “index” or their combination are appropriate. Bob Phillips noted that potentially using several factors in sequential order may be another approach. Use of any index as opposed to selective discreet and DIRECT measures of health status of populations is an issue for discussion by the big committee. Don Taylor suggests discussion of merits of an index vs. separate variables.

Alice Rarig showed an example of an updated scoring approach to account for income disparities and health status disparities to illustrate one way to update the methodology for MUA.

Note: the “barrier free” calculation corrects on a national level for presence of impediments of SES and economic and geographic barriers having suppressed demand nationally, perhaps differentially across age and gender. What is not accounted for in that process is potential unmet special or high need indicators in an area, or of a specific population.

#### **4. Next Steps**

- a. Go over issues still needing discussion – regarding provider weights for those not fully included such as NPs, PAs, CNMs, and Ob/Gyns; be sure big committee is aware of the “developmental” stage of all the provider data sets – confirm that “impact testing” assumptions need to be developed that might apply a flat percentage for example to Ob/Gyns (.4 FTE has been mentioned), but that the rule implementation should (according to the agreement on the Data/Tech Subcommittee) continue to

allow for the local survey and state data sources that can take better account of actual current activity and involvement in direct ambulatory primary care.

b. Consider how the pieces of the puzzle should be combined with in a methodology:

-- alternative models and methods

-- criteria:

Validity of measures/variables/inputs as well as combination

Taking into account all dimensions that should be used – appropriate for urban, rural, frontier, islands, suburban areas, etc.

Appropriate differentiation of populations and places with diverse kinds of unmet need

c. Consider our ability to provide the explanation/rationale (marketing, transparency)

d. Consider the testing of potential impact (national, state level and other tests)

Attachments:

(1) Social Deprivation Index statement by several members of the Data Technical Subcommittee.

(2) Combo Matrix –contains tabs for

- a) Statutory and regulatory language and “elements” identified for consideration
- b) providers and comments on inclusion preferences
- c) population types and comments on inclusion preferences
- d) health status measures and comments on potential applicability
- e) socio-economic variables and comments on potential applicability