Registered Nurse Shortages: The Road To Appropriate Public Policy
by Craig J. Newschaffer and Julie A. Schoenman

Although the federal government began its peacetime support of registered nurse (RN) education soon after World War II, not until Congress passed the Nurse Training Act (NTA) in 1964 did the government become a conspicuous presence in the nurse labor market. Government's direct intervention in a labor market is conventionally justified by the joint claims that expected improvements in social welfare will exceed the costs and that no other entity is better suited to take action. In the case of the RN labor market, the federal government has been very willing to admit that the behavior of the parties involved is sufficiently complex to warrant careful scrutiny prior to the prescription of public policy. In fact, the NTA was enacted by Congress only after the Surgeon General's Consulting Group on Nursing, a group specially convened to complete a study of the nurse labor market, predicted an impending national shortage of RNs.

A number of programs have been included under the umbrella of the NTA since its inception. The act itself has been modified in the reauthorization process six times. While various modifications have included programs designed to target particular issues in nursing education (for example, clinical specialties or geriatrics), the backbone of the act has been the subsidy of general RN education through grants to schools of nursing. Some of these funds have then been made directly available to students through loan programs.

When Congress reauthorized the NTA in 1979, the nation was in the midst of another severe RN shortage. As part of the reauthorization, Congress mandated a second major government-sponsored study of the nurse labor market. The resulting study, carried out by the National Academy of Sciences' Institute of Medicine (IOM), concluded that both the current and projected supply of staff RNs were adequate to meet demand and that expanding federal subsidy of generalist nursing educa-
tion no longer seemed wise. This finding was extremely controversial, since many participants in and observers of the nurse labor market could easily recall the severe shortage of 1979–1980 and felt that no significant policy changes had occurred to guard against recurrence. However, given the spirit of retrenchment pervading the executive branch, the IOM report’s recommendations seemed to be warmly received there. Although NTA programs have been retained through the 1980s, the available funding was severely curtailed beginning early in the decade.

Late in 1987, faced with mounting evidence of yet another RN shortage, the federal government again contemplated action. Otis R. Bowen, then secretary of the Department of Health and Human Services (HHS) and a member of the earlier IOM study group, called for the formation of yet another special commission to examine the nature and extent of a nurse shortage. As it happened, reports of the shortage were so pervasive and severe that Congress acted before the commission’s report was released, incorporating a Nursing Shortage Reduction Act into the 1988 Omnibus Health Legislation. Although this legislation answered the calls for congressional action, it appeared to be largely a reflexive response that relied exclusively on the familiar supply-side policy levers. It continued the NTA subsidy and added an additional financial assistance program for prospective nurses willing to work in areas of severe shortage.

Meanwhile, the Secretary’s Commission on Nursing (SCN) spent nearly six months studying the shortage’s underlying causes before formulating its recommendations. The recommendations of this twenty-five-member commission, released in December 1988, called for both public- and private-sector response. This Commentary reviews and assesses those recommendations. Our remarks are based on data pertaining to past RN shortages and reflect our interpretation of the effectiveness of alternative public policies.

**Historical Overview Of Past Nursing Shortages**

Researchers studying the historical performance of the nurse labor market claim that the major problem in the days before the NTA was the oligopsony power of hospitals, which enabled them to hold nurse wages below the market-clearing level. When wages are prevented from fluctuating, the resulting shortage is classified as “static.” Under these circumstances, some of the reported unmet demand is artificial because the number of RNs demanded by employers at the constrained wage exceeds the quantity they would demand if wages were allowed to increase.

The advent of the NTA in such a market could have allowed some employers to hire additional RNs without raising wages. However, much
of the post-NTA growth of the active RN supply has been attributed to the introduction of Medicare and Medicaid. These programs allowed employers of nurses to raise RN wages and pass part of the resulting cost increase on to a deep-pocketed payer. By 1969, nursing had become a more attractive profession economically, newly graduated RNs entered the work force in increased numbers, and hospital RN vacancy rates had declined from the highs of the early 1960s. The era of static shortage in the RN labor market had ended.

**Market imbalances**, Despite the disappearance of static shortages, the 1980s were marked by two imbalances in the nurse labor market: the shortages of 1979–1980 and of 1986–1988. Linda Aiken and Connie Mullinix have suggested that a flattening of RN wages through the middle and late 1970s was a key event precipitating the first of these shortages. They point to the imposition of hospital wage and price controls in 1972 as being initially responsible for employers' tightening of purse strings and hypothesize that the movement toward increased competitiveness and cost-consciousness in the health services sector reinforced this trend. However, it is also important to emphasize that the ranks of new RNs swelled in the early 1970s (probably a delayed response to the higher wages of the late 1960s) and that hospital RN vacancy rates appeared to be very low during this period. This suggests that internal market forces also were slowing the rate of increase in RN wages. The fact that market forces were moving in the direction required to bring supply and demand into balance suggests that this shortage, in contrast to past shortages, can be characterized as "dynamic." This is not to discount the role of external factors, such as those mentioned by Aiken and Mullinix, but the importance of an emerging dynamism in the nurse labor market should not be overlooked.

As RN wages flattened, whether due to forces external or internal to the nurse labor market, the rate of growth in the number of new RN graduates declined markedly in the mid-1970s. Although the overall supply of RNs continued to grow throughout this period, demand grew more rapidly. Employers were slow to recognize the shifting balance between demand and supply and did not act immediately to increase wages in response to changing market conditions, eventually giving rise to the shortage observed in 1979–1980.

RN wages did eventually begin to rise (starting around 1980) and continued to increase through the early years of the decade. Increases in the numbers of new graduates entering nursing were also observed during that time period, and reported hospital RN vacancy rates had returned to acceptably low levels, on average.

Yet, the nurse labor market certainly never achieved long-lasting equilibrium. By 1987, the nation was experiencing still another severe
nursing shortage. Once again, analysts were pointing to the influence of exogenous factors on wages. The heightened spirit of cost-consciousness and the institution of the Medicare prospective payment system (PPS) in 1983 have often been mentioned as contributing to the slowing of nurse wage growth in the 1980s. While it seems reasonable to surmise that PPS hindered wage growth in the hospital sector, especially in the early stages as hospital administrators adjusted to the new payment system, this exogenous intervention should not completely overshadow the behavior observed in the market during the preceding years, RN wages were climbing, supply was increasing rapidly, and vacancy rates were falling. In a functioning labor market, it would not be surprising to find a leveling off of wage growth as the market approached equilibrium between supply and demand. As RN wage growth slowed, demand for registered nurses again began to outstrip supply in the mid-1980s. Employers were again hesitant to increase wages, and RN vacancy rates began to increase by late 1986."

**Important results.** Two important facts emerge from this historical overview of nursing shortages. First, since the mid-1960s the market for nursing labor generally appears to have functioned in the way predicted by neoclassical economic theory. That is, wage increases were followed by increases in the number of new entrants into the profession and reductions in unmet demand for RNs. Also, as supply increased and the market moved toward a new equilibrium, RN wages began to level off. Of course, the lack of reliable data on this marker makes it impossible to establish causality between wage changes and changes in supply and demand; nonetheless, the available data suggest that there exists a perceptible and plausible response to market forces. Second, although the market appears to adjust toward equilibrium, its response to imbalances between supply and demand is far from immediate. Substantial time lags are observed between, for example, escalating demand and increases in RN wages. It is during these lag periods that the adverse effects of dynamic nurse shortages are felt and government is moved to act.

**Assessment Of The Commission’s Recommendations**

Ad hoc expert advisory panels can advance the policy-making process not only by advocating specific solutions to problems but also, and perhaps more often, by focusing attention on certain issues and/or approaches. The background analyses accompanying commission investigations, the identification and prioritization of distinct problem areas, and the dramatic nature of some suggested actions may all serve to alter the context of an ongoing policy debate regardless of whether particular recommendations are implemented. While the full impact of a commis-
sion's tenure is likely to be greater than the sum of its individual recommendations, the necessary first step to gauging this impact is a critical examination of the content and coherence of the commission's specific recommendations.

Secretary Bowen's Commission on Nursing began deliberations by specifying a framework within which to organize its recommendations. Then, a limited number of recommendations were crafted in broadly acceptable language, to represent a compromise between the diverse viewpoints of the commission's twenty-five members. In this spirit, sixteen recommendations were advanced in six broad topic areas: (1) utilization of nursing resources; (2) nurse compensation; (3) health care financing; (4) nurse decision making; (5) development of nursing resources; and (6) maintenance of nursing resources.

In one way or another, almost all of the SCN's recommendations can be interpreted as promoting decreases in the demand for RNs, increases in RN supply, or both of these simultaneously. However, given the dynamic nature of the shortages in the RN labor market over the past twenty-five years, we anticipate that the most effective policy recommendations would be those recognizing that nurse shortage problems relate to delayed market response. With this in mind, the best recommendations would, in our opinion, have to meet two basic criteria. First, their fundamental goal must be to facilitate the market's movement toward equilibrium, and second, they must be designed to prevent recurring nurse shortage problems, not just to ease short-term problems associated only with the current shortage. Recommendations that fail to meet either one or both of these criteria may still, when implemented, work to resolve the shortage. However, these actions run the risk of having only a fleeting impact and/or producing undesirable, inequitable side effects. For example, easing restrictions on immigration and licensing of foreign nurse graduates could alleviate the current shortage but would do little to prevent future shortages, could adversely affect the quality of U.S. nursing care, and might deplete the supply of nurses in other nations.

Nursing compensation. The past two decades have shown that as demand for nurse labor outpaced supply, employers were slow to respond with increased wages. This has proved to be the primary impediment to a smoothly functioning nurse labor market. Thus, policies designed to make nurse employers more responsive to market imbalances would seem to be key. The SCN strongly supported the concept of improved employer wage response; however, only a limited set of commission recommendations call for specific actions encouraging this behavior. Of those that do, the most obvious example comes under the financing category, where the commission suggested that health care payers expedite the process of
updating payment rates to reflect changing labor costs. Clearly, this would improve RN employers' wage response to increasing demand for RNs.

In addition, the following commission recommendations have the potential to affect the responsiveness of nurse wages: (1) greater nurse representation on decision-making boards of health policy-making, accreditation, and regulatory organizations; and (2) a more active role for nurses in high-level decisions of their employing organizations. This potential will be fully realized only if RNs who move into decision-making positions serve as conduits to and from front-line nursing. For example, those nurses working at the management level in health care delivery organizations might recognize more quickly than nonnurse managers the importance of maintaining a full complement of RNs on staff. Similarly, nurses employed in decision-making positions in government and accreditation agencies may view nurse staffing levels more as a measure of high-quality care, thereby giving employers a more direct incentive to maintain staffing levels.

The commission's recommendation supporting the development of nursing management systems may also lead to more rapid wage response in the nurse labor market. Among other advantages, the commission saw improved nurse management systems as a step toward the conversion of the nursing function in health care organizations from a cost to a revenue center. While this issue has been debated for some time, if a valid and reliable system to measure revenue generated by nursing services were developed and implemented, managers' increased awareness of the contribution of nurses to an organization's bottom line could be a powerful means of prodding employers to increase wages in times of shortage.

Unfortunately, the commission also advanced an ill-conceived plan to elicit a short-term wage response. The plan called for a one-time, across-the-board RN salary increase funded, in large part, by increased reimbursement from public-sector payers. For example, a hospital nurse wage increase would be funded by an increase in the PPS Discretionary Adjustment Factor. Pay increases for nurses employed in other sectors would be supported by increases in unspecified public support (as stated in a separate financing recommendation). Although the immediacy of this dramatic recommendation is appealing, it would provide employers with a subsidy to cover the costs of increasing nurse wages. The economic incentives that would encourage employers to rethink their high levels of demand for RNs will be lost if employers do not bear the cost of salary increases. Under this scheme, employers would, in a sense, be rewarded for their reluctance to raise wages.

Demand issues. Along with actions geared at improving the market's responsiveness in adjusting the price of nurse services, some actions must
be directed toward demand and supply. On the demand side, many studies have depicted employers' demand for nurses as ever-growing. In addition to population demographics and proliferation of medical technologies, the SCN recognized that some of the recent increases in the demand for nurse services may have been generated by the movement toward RN-intensive staffing arrangements. These staffing patterns may, even if they seemed economically prudent at inception, place undue stress on working nurses and result in long-run operating inefficiencies.

Recognizing this, the commission put forth recommendations designed to disseminate information on more effective staffing models. They recommended: (1) that industry associations establish information clearinghouses to share staffing information among employers; (2) that nurse professional organizations and the federal government help disseminate available information about effective staffing and practice patterns; and (3) that the government support research efforts to improve our understanding of the concept of efficient staffing and evaluate potentially efficient staffing arrangements.

**Future supply.** Finally, although data on the most recent shortage indicate that it is a demand-driven phenomenon, the commission was concerned about supply problems in the near future. In that regard, the commission suggested the development of a range of financial inducements for prospective nursing students. The bulk of the recommended programs would link financial assistance to the nursing student's willingness to work in geographic and/or specialty areas experiencing shortages. Funding for these programs would come from both the federal government and employers of nurses. Members of the commission were understandably alarmed by the recent downward trend in nursing school enrollments, but the commission’s advocacy of supply-side subsidy may still be premature.

As discussed above, historical data indicate that eventual wage response appears to trigger increases in new nurse supply. While providing tuition subsidies to nursing school students is a market-facilitating action, it may be unnecessary and even, in some ways, counterproductive—especially if government funds the subsidy. If employers fund the subsidy (for example, through service payback loans), then the direct flow of funds from the demander to the supplier remains intact. However, if government provides the subsidy, employers may restrain wage increases over the long run as they wait for the subsidy's supply effects.

The commission did, however, advance other market-facilitating recommendations that could affect long-run supply. For example, it challenged the nursing profession to take a more active role in promoting an accurate and positive image of nursing. Specific suggestions ranged from
the establishment of an advisory panel to work with entertainment media portraying nurses, to the formation of local boards to serve as liaisons to women's, minority, and special-interest organizations as well as private-sector business groups. The diffusion of a positive nursing image (which would no doubt be aided by more rapid market wage response) was seen as an important factor in increasing the number of students interested in nursing careers.

In addition, the commission suggested that organized nursing mount campaigns designed to make “nontraditional” nursing students (such as minority students, males, or late- or second-career people) aware of opportunities in nursing. Nurse education programs and state nursing boards were also urged to find ways to facilitate upward mobility within nursing education (LPN to RN, or diploma RN to baccalaureate RN). In fact, the commission suggested that nursing schools with such programs be rewarded with additional state government funding.

Prospects For Change

Along with those recommendations that seem to hold the most promise for market facilitation, the commission also presented its vision for desirable behavior on the part of various players in the nurse labor market. Recommendations that urge employers to raise wages or investigate appropriate nurse staffing patterns are more reflections of commission goals than directly implementable strategies. Their weight in promoting change stems exclusively from their status as commission opinion. Yet, as mentioned earlier, this alone can have substantial influence. To the extent that those active in the nurse labor market are unsure or misinformed about priority problem areas or general approaches to resolving the shortage, these well-publicized commission statements may provide the impetus necessary to effect change.

In sum, several of the recommendations of the SCN are designed to promote a labor market that is responsive to imbalances in RN supply and demand. The commission tended to refrain from stop-gap measures (except for their recommendation of a one-time wage increase) and, for the most part, avoided recommendations having unintended, adverse consequences (except, perhaps, the government-funded subsidies to nursing students). The commission should be commended for a fundamentally sensible report—especially since their deliberations coincided with the height of the shortage and its attendant publicity. In this review we have the benefit of over a year of hindsight. Our belief in market-facilitating policy has been reinforced by data compiled since the commission last met in late 1988. It seems that during that year, although the
nurse shortage had come nowhere near to resolving itself, nurse wages did begin to rise, nursing school admissions did start to increase, and vacancy rates did begin to fall.\textsuperscript{14} Had the commission been aware of these trend reversals stemming from market response, perhaps its report would have presented a set of recommendations even more unified in their intent to speed the nurse labor market toward equilibrium and to discourage the recurrence of future imbalances by facilitating market response.

\textbf{NOTES}

2. The Institute of Medicine (IOM) did recommend, however, that federal subsidies targeted at graduate nurse education be increased.
3. See, for example, D. Yett, \textit{An Economic Analysis of the Nurse Shortage} (Lexington, Mass.: D.C. Heath and Company, 1975); or F. Sloan, \textit{The Geographic Distribution of Nurses and Public Policy} (Washington, D.C.: U.S. Department of Health Education and Welfare, 1975). Careful analysis of the problems of the nurse labor market is, unfortunately, hampered by the lack of high-quality, timeseries data. Ideally, these data would include frequent and concurrent observations of supply, demand, and wages. Instead, much of the available data is piecemeal and cannot be easily generalized. Analysts have had to contend with these problems when describing the events surrounding RN shortages.
7. National League for Nursing, \textit{Nursing Student Census with Policy Implications}.
8. As pointed out, their lethargy may be in part attributable to the external influences of wage and price controls.
11. The American Hospital Association's Hospital Nursing Demand Survey supplied some of the first data indicating rising hospital nurse vacancy rates.
12. Despite these efforts, a minority report was submitted by one commissioner and was included as an appendix to the commission's final report.
13. For a complete listing of the commission's recommendations, see Secretary's Commission on Nursing, \textit{Final Report} (December 1988).

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