내과 입원전담전문의 수요 추계

미국



The New England Journal of Medicine

Sounding Board

The Emerging Role of "Hospitalists" in the American Health Care System

THE explosive growth of managed care has led to an increased role for general internists and other primary care physicians in the American health care system. This change is welcome in many respects, since generalists have perennially been undervalued by health care institutions, payers, and even patients.[1-3] The greater prominence of generalism has led to an increase in the number of medical students who choose careers in primary care,[4] expanded job opportunities for generalists,[5] and a modest increase in the incomes of primary care physicians.[6]

Two of the principles underlying generalism, whether in the form of internal medicine, pediatrics, or family medicine, have been comprehensiveness and continuity.[7,8] Ideally, the primary care physician would provide all aspects of care, ranging from preventive care to the care of critically ill hospitalized patients. This approach, argued the purists, would result in medical care that was more holistic, less fragmented, and less expensive.[9] To its proponents, the notion was so attractive — the general internist admits the patient to the hospital, directs the inpatient workup, and arranges for a seamless transition back to the outpatient setting — that questioning it would have seemed sacrilegious merely a few years ago.

Unfortunately, this approach collides with the realities of managed care and its emphasis on efficiency. As a result, we anticipate the rapid growth of a new breed of physicians we call "hospitalists" — specialists in inpatient medicine — who will be responsible for managing the care of hospitalized patients in the same way that primary care physicians are responsible for managing the care of outpatients. Specialists in inpatient care have long had a central role in urban hospitals in Canada and Great Britain, but until recently, such specialists have been scarce in the United States. However, a role for this specialty is now being developed both in and outside academia, especially in areas where managed care predominates, such as San Francisco, and we expect this growth to accelerate soon.

We believe the hospitalist specialty will burgeon for several reasons. First, because of cost pressures, managed-care organizations will reward professionals who can provide efficient care. In the outpatient setting, the premium on efficiency requires that the physician provide care for a large panel of patients and be available in the office to see them promptly as required. There is no greater barrier to efficiency in outpatient care than the need to go across the street (or even worse, across town) to the hospital to see an unpredictable number of inpatients, sometimes several times a day. There are parallel pressures for efficiency in the hospital. Since the inpatient setting involves the most intensive use of resources, it is the place where the ability to respond quickly to changes in a patient's condition and to use resources judiciously will be most highly valued. This should prove to be the hospitalists' forte.

Equally pressing is the question of value, defined as the quality of care divided by its cost.[10] The survival of all health care systems is becoming increasingly dependent on the delivery of high-value care. (For academic health centers, this means that more expensive care must be justified by better outcomes.) Many physicians, though primarily serving outpatients, have exceptional skills in providing inpatient care. It seems unlikely, however, that high-value care can be delivered in the hospital by physicians who spend only a small fraction of their time in this setting. As hospital stays become shorter and inpatient care becomes more intensive, a greater premium will be placed on the skill, experience, and availability of physicians caring for inpatients.

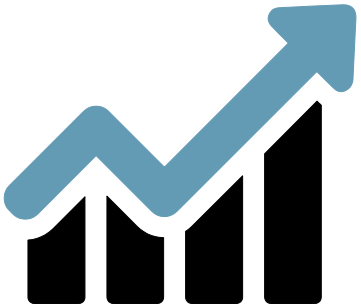
The debate over the role of hospitalists is taking place against the backdrop of the larger controversy over whether generalists or specialists should provide care for relatively ill patients.[11] The first decade of managed care has been dominated by a gatekeeper model, in which care is managed by a primary care physician. There is some evidence that this model saves money,[12,13] and for common diseases, the quality of care provided by generalists and specialists appears to be similar.[14] Building on a considerable body of data demonstrating a positive rel… tween procedural experience and ou… number of recent studies have exa… similar relation exists for nonpro… tients with complex medical illn… vor the use of inpatient speci… point to the strong correlati… the quality of care provided f… sive care unit,[19,20] as well as fo… asthma,[26,27] rheumatoid arthr… syndromes.[29-31]

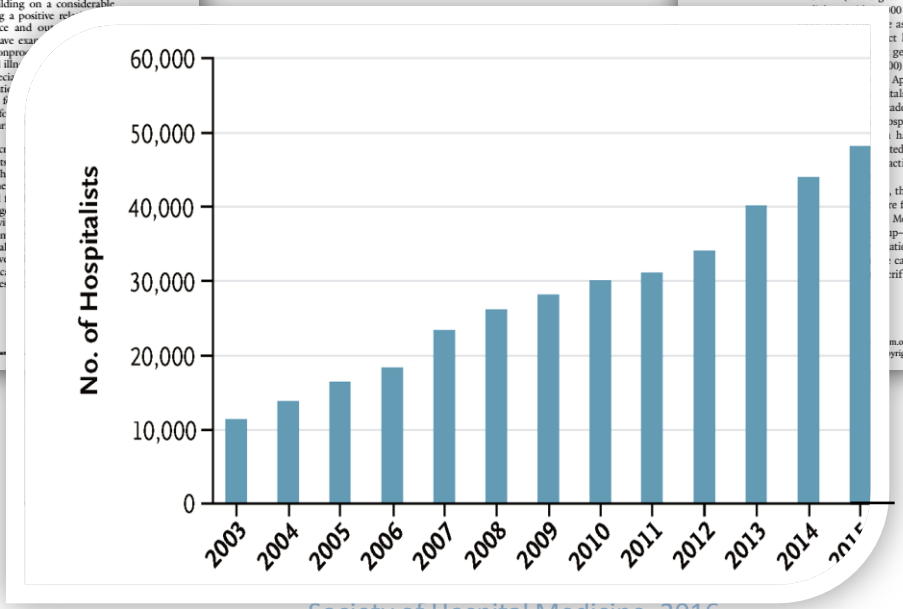
If our prediction of an incr… ists is borne out, the effect… centers will be profound. Th… — skilled clinician, researche… the paradigm of exceptional … fantasy) for more than a g… productive research career wi… care was easier when acaden… less accountable for the qual… care than they are now. Giv… for funding research,[32] one c… threats in the future, with re…

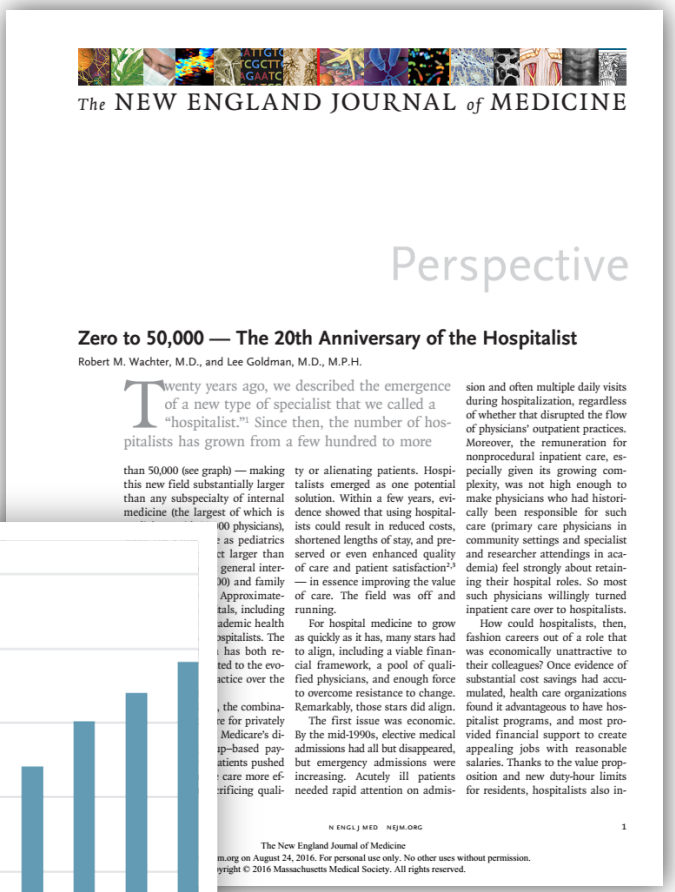
514 · August 15, 1996

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The NEW ENGLAND JOURNAL of MEDICINE

Perspective

Zero to 50,000 — The 20th Anniversary of the Hospitalist

Robert M. Wachter, M.D., and Lee Goldman, M.D., M.P.H.

Twenty years ago, we described the emergence of a new type of specialist that we called a "hospitalist."[1] Since then, the number of hospitalists has grown from a few hundred to more than 50,000 (see graph) — making this new field substantially larger than any subspecialty of internal medicine (the largest of which is …00 physicians), … as pediatrics … larger than … general inter… 00) and family … Approximate… tals, including … ademic health … ospitalists. The … has both re… ted to the evo… actice over the … the combina… e for privately … Medicare's di… p–based pay… atients pushed … care more ef… rifying quali… ty or alienating patients. Hospitalists emerged as one potential solution. Within a few years, evidence showed that using hospitalists could result in reduced costs, shortened lengths of stay, and preserved or even enhanced quality of care and patient satisfaction[2,3] — in essence improving the value of care. The field was off and running.

For hospital medicine to grow as quickly as it has, many stars had to align, including a viable financial framework, a pool of qualified physicians, and enough force to overcome resistance to change. Remarkably, those stars did align.

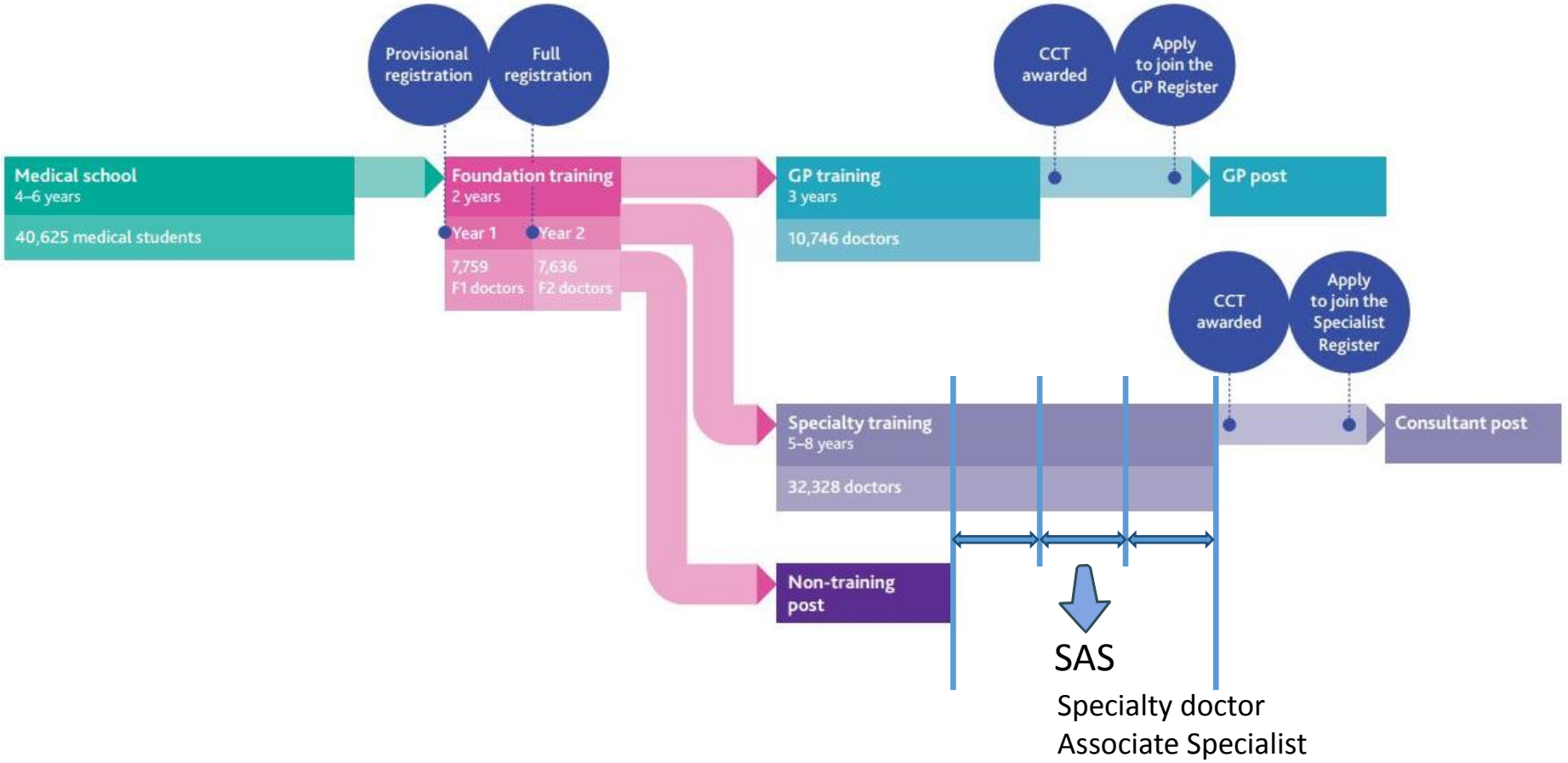
The first issue was economic. By the mid-1990s, elective medical admissions had all but disappeared, but emergency admissions were increasing. Acutely ill patients needed rapid attention on admission and often multiple daily visits during hospitalization, regardless of whether that disrupted the flow of physicians' outpatient practices. Moreover, the remuneration for nonprocedural inpatient care, especially given its growing complexity, was not high enough to make physicians who had historically been responsible for such care (primary care physicians in community settings and specialist and researcher attendings in academia) feel strongly about retaining their hospital roles. So most such physicians willingly turned inpatient care over to hospitalists.

How could hospitalists, then, fashion careers out of a role that was economically unattractive to their colleagues? Once evidence of substantial cost savings had accumulated, health care organizations found it advantageous to have hospitalist programs, and most provided financial support to create appealing jobs with reasonable salaries. Thanks to the value proposition and new duty-hour limits for residents, hospitalists also in-

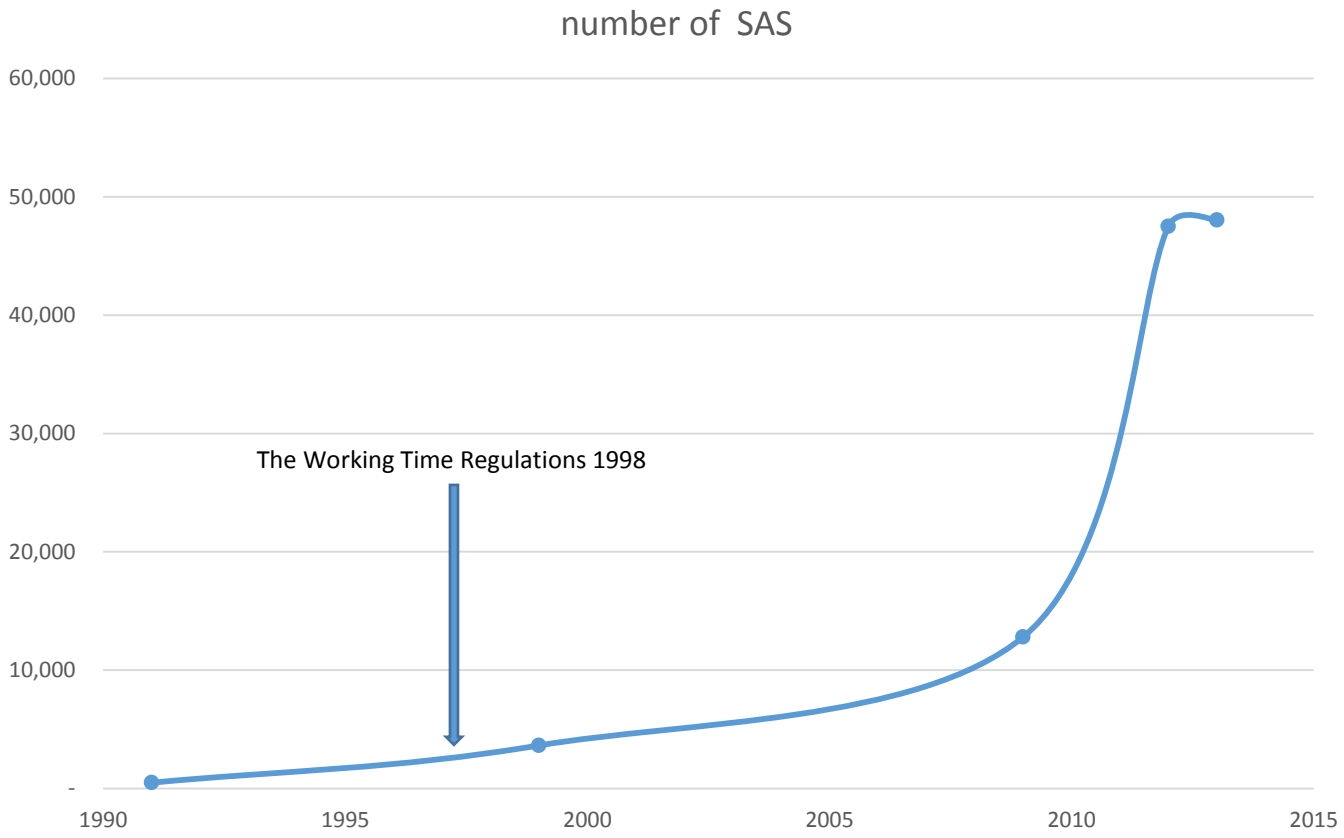
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Wachter, Goldman. NEJM 2016

영국의 Medical Training 과정



(General Medical Council)



- 490 (1991) → 3,640(1999) → 12,800(2009) → 47,492(2012) → 48,027(2013)

	All doctors	GPs	Specialists	Doctors not on the GP or Specialist Register		
				Including doctors in training	Excluding doctors in training	Only doctors in training
2013	238,247	58,996	71,461	106,496	48,027	58,469
2012	236,226	58,650	69,268	107,009	47,492	59,517
2010	226,660	56,892	63,604	104,925	n/a	n/a
1-year change (2012–13)	0.9%	0.6%	3.2%	-0.5%	1.1%	-1.8%
3-year change (2010–13)	5.1%	3.7%	12%	1.5%	n/a	n/a

(General Medical Council)

내과 입원전담전문의 수요 추계

$$E_{\text{hospitalist}}=(\sum_{l=300}^{1000} aNB_s \times Pim \div sN.B \times N.Hs) \times (1-\frac{N.RB}{N.Bh_{\geq 300}}) \times N.Hospitalist\ per\ warda)$$
$$+(\sum_{l=200}^{300} aNB_s \times Pim \div sN.B \times N.Hs) \times N.Hospitalist\ per\ wardb)$$

$E_{\text{hospitalist}}$ *: expected number of hospitalist*
aNB_s *: average number of bed by hospital size (s=100, 200 ... 1000)*
$sN.B$ *: standard number of bed*
$N.Hs$ *: number of hospital by hospital size*
N. Hospitalist per ward : a=5, b=5 in scenario 2 and 2.5 in scenario 3

조건
· 전체 병상의 30%가 내과병상 (서울, 종합병원이상의 평균 29.4%)
  - 병원급 이상 1,829개 기관의 336,685개 병상 중 101,005병상을 내과 병상으로 산정
· 전공의 당직 병상은 21,105 병상
 - 전공의 근무시간 88시간 중 60시간 (12시간x주5일)을 제외한 28시간을 병동 당직 근무 시간으로 산정
 - 전공의 병동의 당직 필요 시간은 주 108(12시간x주5일+48시간 (주말)로 산정
 - 전공의 정원 603명, 3개 연차로 총 1,809명 근무 가정
 - 전공의 1인의 당직 병상수는 45병상으로 가정
 - 전공의는 300병상 이상 의료기관에서 수련 받는 것으로 가정
· 입원전담전문의 5인이 24시간 관리하는 병상수는 45병상을 기준으로 함
· 요양병원 제외, 초기 입원전담전문의 30명으로 설정

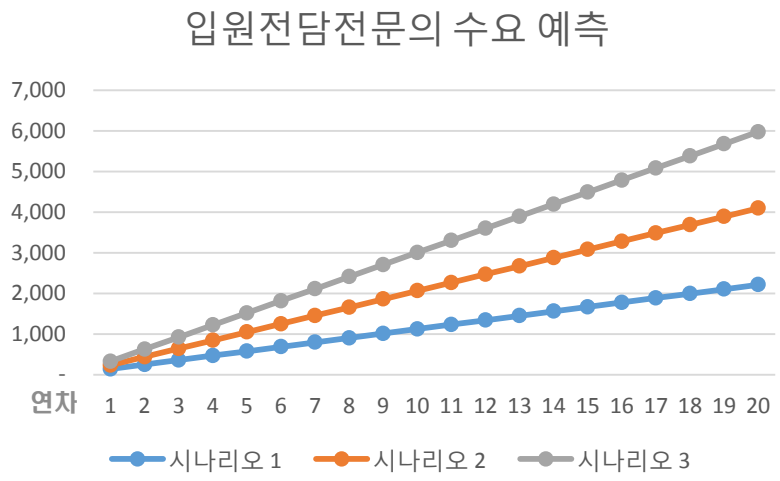
시나리오 1
· 300병상 이상 의료기관 전체

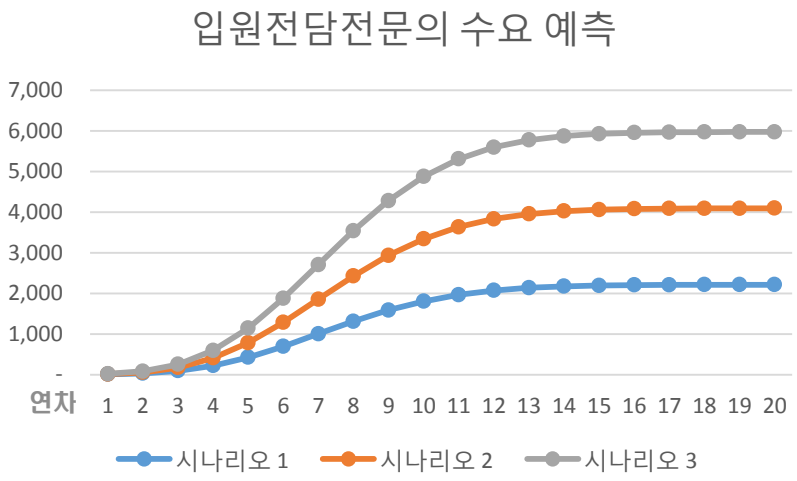
시나리오 2
· 100병상 이상 의료기관 전제
(단, 100~299병상 의료기관의 경우 입원전담전문의 관리 기준 병상수를 2배로 함)

시나리오 3
· 100병상 이상 의료기관 전체

내과 입원전담전문의 수요 추계

	시나리오 1 (300병상 이상)	시나리오 2 (100병상 이상 1)	시나리오 3 (100병상 이상 2)
최종 수요	2,213	4,096	5,978





슬라이드 설명 입니다

- 의료기관의 병상 규모에 따라 (100병상 단위) 추정 내과 병상에 대해서 45병상을 1개 병동으로 하여 운영 가능한 “입원전담전문의 병동 " 수를 계산하였습니다.
- 전공의 당직 가능 병상 수를 계산하여 제외하였으며, 나머지 병동에 대해 입원전담전문의가 근무 할 경우 필요한 입원전담전문의를 추정하였습니다. 전공의 근무는 300병상 이상 의료기관으로 하였습니다.
- 300병상 이상 의료기관 (시나리오 1), 100병상 이상 의료기관 (시나리오 3)으로 대상을 나누었으며, 100병상~299병상 규모의 의료기관에서는 전문의 5인 팀이 90병상까지 커버하는 모형 (시나리오 2)을 추가하였습니다.
- 요양병원은 근무 기관에서 제외하였습니다.
- 그래프는 입원전담 전문의 30명에서 시작하여 최종 수요까지 지속적으로 증가율이 유지되거나 (그래프 1), 포아송 분포로 확장되는 경우(그래프 2)로 나누어 그렸습니다.
  - 미국의 경우 그래프 1과 유사하지만, 우리나라의 경우 제도적 도입으로 초기 탐색 시기 이후에 필요 수요까지 급격한 증가를 보일 것(그래프 2)으로 예상됩니다.
  - 그래프는 미국과 같이 20년 추계를 그렸습니다.