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Identifying Ways to Cope with the Manpower Crisis in a Medical Specialty – A Case Study: General Surgery

Nurit Nirel ♦ Ayala Hendin ♦ Micha Rabao

The study was funded with the assistance of a research grant from
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RESEARCH REPORT

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Nurit Nirel¹

Ayala Hendin¹

Micha Rabao²

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¹ The Myers-JDC-Brookdale Institute

² Surgery Department, Faculty of Medicine, Tel Aviv University
and the Sourasky Medical Center Tel-Aviv-Jaffa

Editor: Raya Cohen

English translation (executive summary): Evelyn Abel

Layout and print production: Leslie Klineman

Myers-JDC-Brookdale Institute
Smokler Center for Health Policy Research
P.O.B. 3886
Jerusalem 91037, Israel

Tel: (02) 655-7400

Fax: (02) 561-2391

Web site: www.jdc.org.il/brookdale



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Executive Summary

Background

In Israel, as elsewhere, a number of clinical specialties have for some time suffered from a manpower-related crisis. In a previous study, *Medical Specialties in Crisis: An Exploratory Study* (Nirel et al., 2008), criteria were developed for a "medical specialty in crisis" and developed measures to assess the extent of the crisis. We identified the causes of the crisis in two medical specialties, one of which was general surgery and we suggested possible solutions to the crisis based on experience abroad.

The current study sought to further address the question of manpower crisis in general surgery. To this end, we chose the approach of an action study, which focused on finding practical solutions to problems in the organizational context. This type of study demands the involvement of the subjects (in this case, physicians) in identifying the problems and solutions, and formulating an action plan. This study sought to add to the knowledge that had accumulated in the exploratory study, which had searched for ideas among senior figures in the medical establishment in Israel and abroad. In contrast, we now sought to examine how surgeons in the field perceive the problems and possible solutions, and what the successful solutions are in Israeli hospitals. This knowledge is practical, specific to Israel and may contribute considerably to developing a feasible action plan.

The Goal of the Study

The goal of the study was to identify ways to contend with the manpower shortage in general surgery in Israel by focusing on issues that can be addressed at the level of the department, the hospital, the Israel Medical Association (IMA) and the IMA Scientific Council.

The Study Method

The study was conducted in two stages:

- a. To identify the main problems and possible solutions in the work of surgery departments during the period of residency, we conducted a survey relying on semi-structured telephone interviews with some 180 residents in these departments. The survey examined such issues as what attracted residents to general surgery; the topics that most disturbed the residents about the quality of training, their work schedules and the working conditions during their residency in the department; and their opinions as to possible corrective measures at the level of the department or the hospital. The findings of the survey were discussed at the Israel Board of General Surgery.
- b. In the second stage of the study, we adopted the Retrospective Method of Learning from Success in order to identify the principles of action that make some surgery departments successful in terms of attracting residents. To this end, we conducted interviews in five

general surgery departments at hospitals in the center of the country and the periphery: three large hospitals and two medium-sized ones. The general surgery departments included in this part of the study were not chosen at random; they had been cited by the Israel Surgical Association as successful in attracting residents to the department and integrating them in its work, and providing high-level training. In each department, the director, a senior physician and a resident were asked what characterizes the ways that their department successfully copes with the issues being investigated (including the issues raised in the first stage of the study). They were asked to identify actions that had led to improvement in the situation. The content of the interviews was analyzed with the aim of identifying the underlying factors described by the interviewees (the actions are elaborated in the body of the research report) and converting them into general abstract principles for other departments to learn and adopt them in similar situations.

Main Findings

The findings reflect the problems aired and the ways to solve them that emerged both in the survey of residents of general surgery and in the process of Learning from Success which identified the characteristics of the “successful departments” and formulated them on the basis of general principles that can be transmitted to other departments.

A high proportion of the residents’ responses concerning the factors that attracted them to general surgery related to the nature of the profession: it is a broad, varied specialty; it demands thought, responsibility and even heroism; it is practical work with immediate results. They also cited a love of and attraction to the profession, as well as their exposure to it during their medical studies. Few responses gave the sense of it being a choice of “default” without options. The acknowledgment of these factors appears to be the point of departure for any action plan attempting to respond to the manpower crisis in general surgery.

According to the Residents Survey, the chief drawbacks detracting from the quality of training related to the absence of important surgical experiences, an inadequate learning environment, a lack of professional support from senior physicians, and the fact that the residency program was not sufficiently structured, clear and orderly. Regarding work schedules, the residents pointed to the great overload of work, their performance of inappropriate duties, and their interaction with senior physicians, which is often marked by the latter’s unavailability, disparaging attitude, and sometimes even exploitation. Regarding working conditions, residents mentioned low pay and material rewards, as well as the physical conditions – problems with the availability and quality of food, with sleeping arrangements, and with their hours of work and rest. They also mentioned the lack of free time and detriment to family life, problems of human relations at work and a lack of an employment/advancement horizon upon completion of their residencies.

In the Residents Survey, we asked about problems in several defined areas and for suggestions to solve them; in contrast, in the interviews in the “successful departments,” we placed the emphasis on “what had succeeded” with respect to attracting residents, integrating them in a department, and providing high-level training. Thus, the issues emphasized at each stage of the study differed from and complemented one another. Nonetheless, the solutions suggested by the residents to these problems were largely consistent with the characteristics of the “successful departments” and the action principles that we identified, as elaborated below.

The analysis of the interview content in the process of Learning from Success identified 12 general action principles that lend themselves to transmission to, and action by, other departments of general surgery.

The action principles were categorized into three areas: the quality and manner of training during residency, the work schedules, organization of departmental work and the departmental atmosphere; and the comportment of senior physicians.

The action principles identified are:

The Quality and Manner of Training during Residency

1. ***Providing opportunities of exposure for residents to: diverse populations, surgical operations, surgeons and medical disciplines*** – This principle, which emerged as important and effective in attracting residents to a department, relates mainly to the structural characteristics of an organization and is therefore difficult to implement everywhere. However, since exposure to opportunities is a key factor in attracting residents, it should be taken into consideration in the efforts to attract and integrate residents in general surgery departments; there is a need for creative thinking about ways to do so also in hospitals that are neither large nor centrally located geographically.
2. ***From passivity towards interns to active recruitment and an attempt to present the department attractively*** – The idea that interns are a “cheap labor force” should be replaced by the concept that they are a labor force to be courted to remain in the department as residents. This principle emerged from such actions as investing in interns to attract them from their very first exposure to the department, from their early exposure to small surgical procedures, and from the devotion of personal attention to them.
3. ***Improving and structuring training*** – This principle is based on a variety of actions undertaken in the departments, including strengthening theoretical training with the help of extra-departmental sources of knowledge (department-funded further studies, exposure to professionals from outside the department or hospital, encouraging participation in conferences, replacing residents on their shifts to allow them leave for studies). In addition, regular meetings should be established in the department schedule; advantage should be taken of innovative learning technologies; and accommodation should be made for

professional autonomy on the one hand and the provision of structured feedback, on the other; assistance in preparing for licensing exams should be regulated, and the department structure or work processes changed if they affect the training process, for instance, by creating graded training levels in the course of residency; instituting long-term planning of admission dates for residents; and making provisions for joint regional training by several hospitals. The residents also suggested introducing an incentive system to improve training, including a benefit for senior physicians providing training, and a benefit for residents for research and writing articles.

4. ***Highlighting the department's relative advantage*** – It is important to present to residents the special aspects of the department and to highlight its relative advantage, for example, with respect to: structural changes – dividing the department into specialty units – using new medical technologies; the type, quantity and quality of surgical operations performed in the department; and connecting with a medical faculty. The latter opens up possibilities for residents to broaden their professional horizons in the future with a combined medical-academic career.

Work Schedules, the Organization of Departmental Work and the Departmental Atmosphere

5. ***Adapting departmental work to residents of the 21st century*** – This principle was based on the content that emerged from the interviews: the current generation of residents would like control of their lifestyle as physicians and are less prepared to carry the workload of a traditional residency; the ways of coping with the workload, as raised in the interviews, were, for instance, to add manpower (medical, paramedical or administrative), to change how the current workforce is utilized, to redistribute duties, to add specific staff positions accordingly, to share the workload with senior physicians, and to respect the requirement that residents be freed after their shifts.
6. ***Keeping order and adhering to working procedures*** – This principle reflects the need for an orderly, structured process of decision-making, a regular routine in departmental work, and the construction of and adherence to the schedules of residents. From these, success ensues: orderly management of the natural "chaos" of work of the surgery department attracts residents to the department.
7. ***Creating esprit de corps in the department contributes to a good atmosphere*** – Experience has shown that *esprit de corps* is an effective means of coping with the demanding features of the profession, raising the prestige of the specialty and the department, and enhancing the working environment.
8. ***Human relations – a key component of workplace relations*** – Availability of and access to senior physicians for residents, the physical presence of the department director to enable immediate solutions to problems, concern for and taking pride in residents both internally

and externally, a norm of partnership between senior physicians and residents and the recognition of the importance of human relations skills for purposes of admitting new residents to the department – all these are highly effective ways of attracting residents to surgery departments.

9. ***Attention to improving the material conditions of the department*** – It is highly important to maintain physical conditions and a work environment that transmit a sense of seriousness and respect for residents. In this connection, the Residents Survey yielded suggestions to increase the benefits as regards both salary and complementary rewards, such as monetary grants for specializing in general surgery, as well as suggestions that apparently relate to the national level of collective negotiations rather than to the freedom of action of each individual department.

The Comportment of Senior Physicians

10. ***Senior physicians are role models for residents*** – The actions of the “successful departments” on which this principle is based includes setting a personal example by senior physicians, their decision to devote themselves to hospital work only, their medical and surgical professionalism, and their sharing in the enthusiasm of residents.
11. ***Mentoring – a key component of the role of senior physicians*** – This principle rests on the concept that senior physicians should serve as mentors: that it is important to get to know a resident personally to enable personalized training, that dialogue between senior physicians and residents is important, and that senior physicians should participate in departmental duties to allow residents time to study. It is also based on a departmental norm that mistakes are part of the learning process.
12. ***Helping to create a professional horizon*** – The actions on which this principle were based include assistance in forming contacts for the fellowship period; long-term feedback and evaluation that are part of the yearly residency program and afterwards; and the presentation of aims and a departmental vision in which residents can find their place.

Programmatic Directions

The study findings are intended to serve as a basis for the process of decision-making about the actions to be taken to attract and retain residents to general surgery. It is proposed that priorities be set in addressing and resolving the issues raised by examining the action principles and solutions identified in the study in terms of “leverage for change,” i.e., to examine the extent to which the solutions suggested and action principles identified are expected to promote the desired change of attracting more residents to surgery departments and encouraging current residents to continue working there. The examination may rest on the following considerations: effectiveness – an estimation of the extent to which the suggested solutions will be effective in attracting and integrating residents in the department; length of time needed for implementation – an appraisal of the necessary time frame for implementation and whether the solution should be short- or

long-term; financial costs – an assessment of the costs involved in the solution and who should bear them; feasibility – whether the solution can be applied at the level of the department, the hospital or the IMA Scientific Council, and clarification of which parties would be responsible for decision-making and which, for implementation; and mutual influences – an estimation of the likelihood of by-products that may affect the advisability of the chosen solution.

The choice of alternatives for an action plan for addressing the manpower crisis in general surgery should thus be based on an evaluation of the extent to which the action principles, and the solution they include, constitute leverage for change. In addition, note that in choosing the alternatives for action, there is no one right way. The general principles identified rested on various action principles that differed from one another. Every hospital or department can thus examine which suit them and which actions to perform in order to implement them.

Given the expected shortage of physicians, the study does not offer a comprehensive solution to the manpower crisis in general surgery. The study contributes significantly to identifying feasible solutions at the department and hospital level that have already succeeded in Israeli hospitals and thus offer a way of making the residency period more attractive to potential residents and more effective.

The study findings may serve as the basis for the action plan being developed by the Israel Surgical Association. They will also be of interest to the Ministry of Health, the Finance Ministry and the Israel Medical Association.

The findings have already been presented at various forums including the National Council of the Israel Surgical Association and at a conference of the association discussing trends and change in the structure of general surgery residency.

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